

THE TECHNOLOGY REVIEW



George C. Wolcott

RELATING TO THE MASSACHUSETTS
INSTITUTE OF TECHNOLOGY
JULY ● ● ● ● 1929

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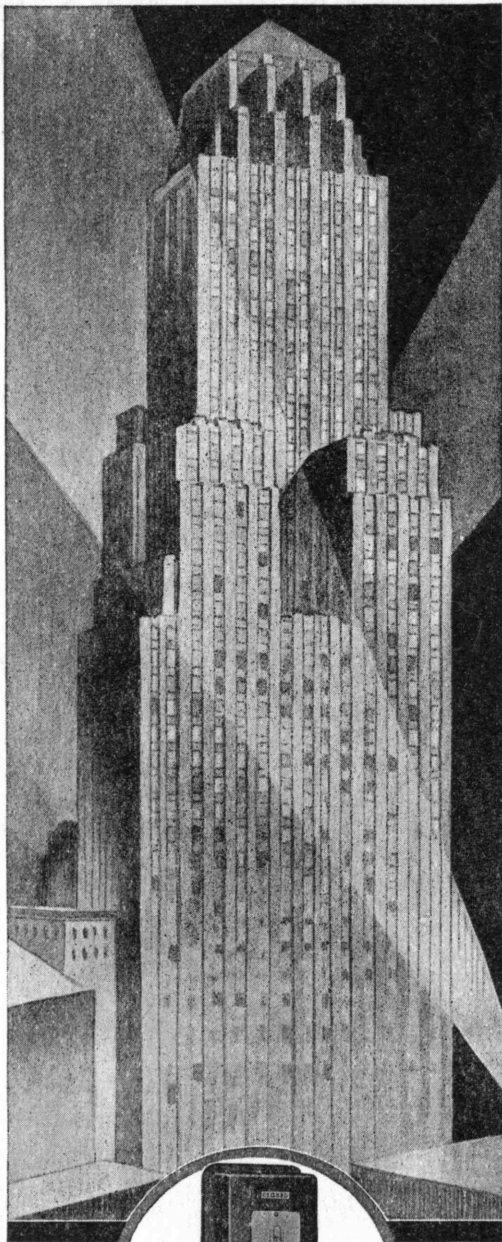
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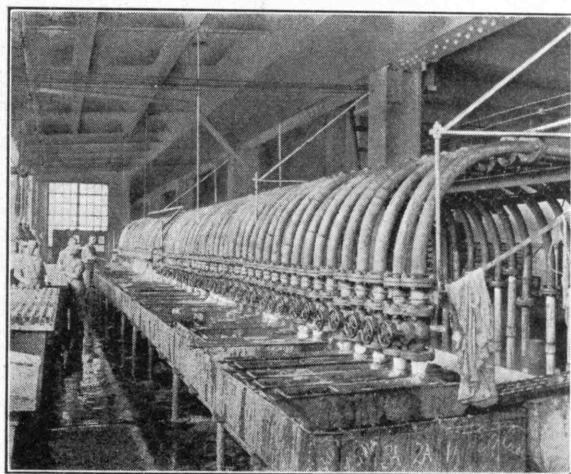
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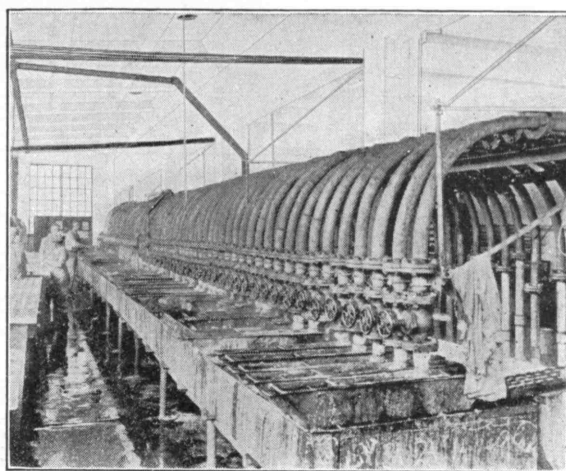


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Contents for July, 1929

THE TABULAR VIEW	453
PRIMITIVE THINKING	457
<i>The occult beginnings of authentic science</i>	
By TENNEY L. DAVIS, '13	
WANDERINGS IN THE MIDDLE EAST	460
<i>Experiences of a petroleum engineer in the country of Darius and Xerxes</i>	
By FREDERICK G. CLAPP, '01	
THE WORLD'S FOOD	463
<i>Will the Malthusian threat of famine continue to be frustrated by science?</i>	
By SAMUEL C. PRESCOTT, '94	
BE A SNOB	466
<i>Further comments on a recent controversy</i>	
By ROBERT E. ROGERS	
A TECHNOLOGY DIRIGIBLE	467
<i>Round Hill Experimental Station to use the Goodyear dirigible "Mayflower" for fog and radio research</i>	
By EDWARD L. BOWLES, S.M., '22	
WEIGHTS AND MEASURES OF ANTIQUITY	468
BOOKS	469
<i>The History of Man, By R. S. LULL; The Art of "Cloaking a Troutbe With Colour Tenebrous," By J. R. K.; Bibliomania, By J. D. C.; Deck Scrubbing and Blackbirding, By C. C. C.; Blood and Thunder, By H. E. L.; and Reviews in Brief.</i>	
VISITING COMMITTEE REPORT	471
<i>Covering the recent meeting of the Visiting Committee for the Department of Naval Architecture and Marine Engineering. Published by arrangement with the Executive Committee of the Corporation</i>	
THE INSTITUTE GAZETTE	474
ADVERSARIA	480
THE COVER: From an etching, "Weather,"	
By GEORGE C. WALES, '89	
Courtesy Charles E. Goodspeed and Company	
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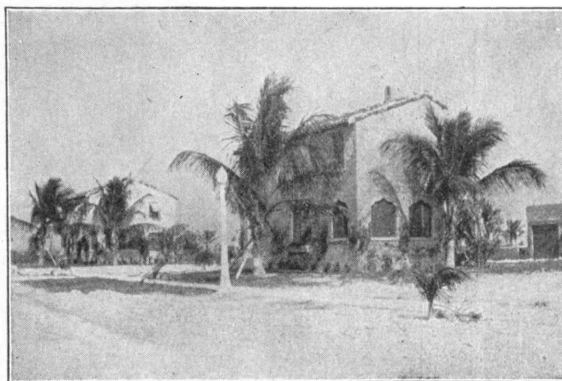
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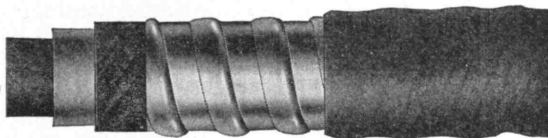
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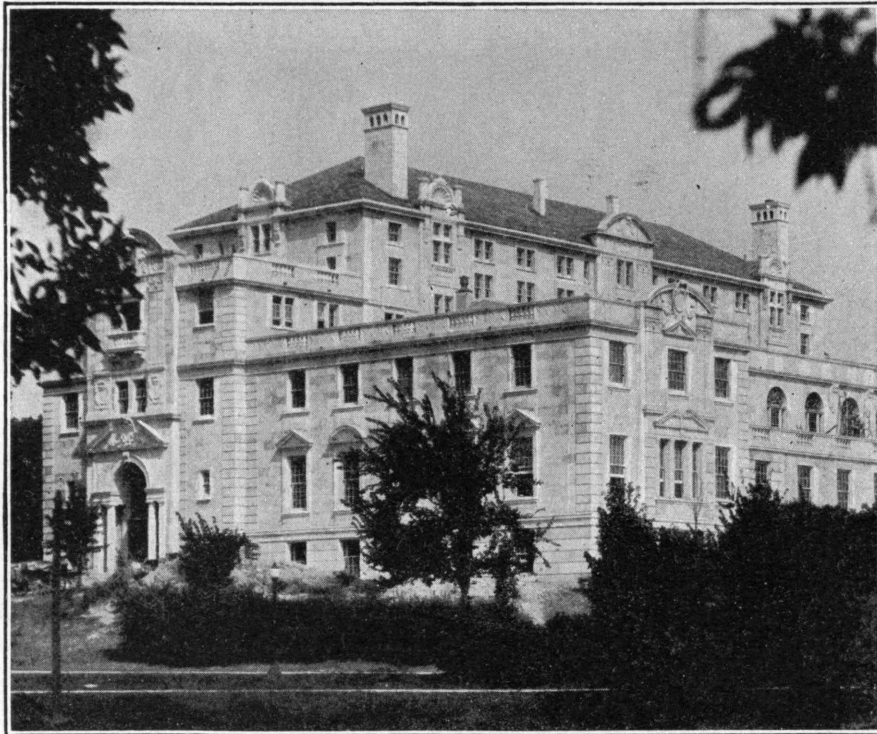
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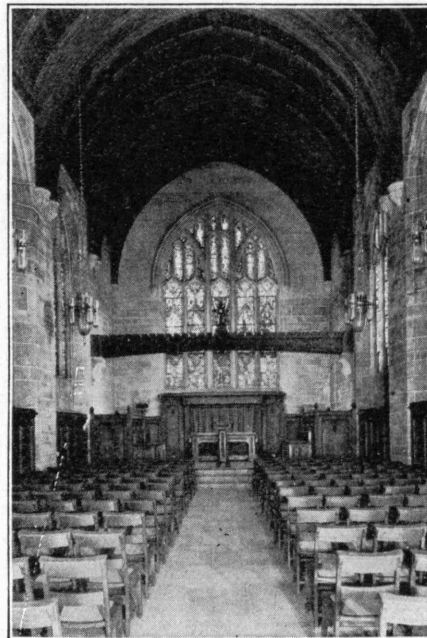


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THE TABULAR VIEW

THERE is a growing realization that scientists must know more history and historians know more science, and many are busying themselves toward this end. The American Chemical Society two years ago established a division of history, and elected as the Secretary of it TENNEY L. DAVIS, '13, Associate Professor of Organic Chemistry at the Institute, and author of the first article in this issue, "Primitive Thinking." For years Professor Davis has been doing research work in this field, as attested by the many monographs on that subject he has published and the rare library he has assembled. His contribution to The Review this month represents a segment of his investigations, the occult beginnings of the scientific method. ¶ FREDERICK G. CLAPP, '01, whose article, "Oil in the Antipodes," appeared in The Review for December, 1926, continues his professional peregrinations and fortunately finds time to write about them. As chief geologist of the Associated Geological Engineers, his work takes him all over the world. More specifically, he is a petroleum engineer specializing in reports on oil and gas properties. He has conducted a geological exploration of China, made special investigations in Australia and New Zealand, and acted as petroleum advisor to the Imperial Government of Persia. It is of his work in Persia that he writes in this Review.

SAMUEL C. PRESCOTT, '94, Professor of Industrial Biology, has been carrying on the work begun by William T. Sedgwick as Head of the Department of Biology and Public Health. His interest in food supply is of long standing. In 1905 he founded in Boston a Biochemical Laboratory in which many food problems were studied. In 1912 and 1913 he made several trips to the tropics and organized a research laboratory for the United Fruit Company. The World War called and he became a Major in the Food Division of the Sanitary Corps and served as the officer in charge of food storage and research problems. His \$30,000 cup of coffee will be recalled by newspaper readers of several years ago and those who read books might have read the sketch of him and his work in "Industrial Explorers" (Harpers), by Maurice Holland, '16, and Henry Pringle. ¶ The development of Technology's experimental radio station W 1XV at South Dartmouth, Mass., on the estate of Col. E. H. R. Green has been supervised by EDWARD L. BOWLES, S.M., '22, who writes on page 467 of the great program of expansion that is now being undertaken there. Professor Bowles received his B.S. from Washington University. Since 1927 he has been an Associate Professor of Electrical Communication.

ROBERT E. ROGERS, whose advice to the graduating class at Technology recently aroused the press to varied comment, was graduated from Harvard in 1908. The following year he received his Master's degree from the same college. He came to the Institute as an Instructor of English in 1913, became an Assistant Professor in 1917
(Concluded on page 454)

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THE TABULAR VIEW

(Concluded from page 453)

and an Associate Professor in 1923. Readers of The Review will recall that as Editor of The Review from 1917 to 1922, he earned the distinction of being the only non-Technology man to hold that post. Professor Rogers is in much demand as a lecturer and has been giving University Extension courses for a number of years. Since his talk to the seniors letters of comment have poured in upon him and the Institute's administrative officers.

ONE of the administrative policies of President Stratton has been to give the different Departments of the Institute an opportunity to obtain advice and cooperation from leaders in the industries for which the Department trains students. Accordingly there has been created the Advisory Committees that meet with Faculty members of the Departments to discuss educational and industrial needs. To supplement this system of Advisory Committees there are for the different Departments Visiting Committees composed of members of the Corporation. These committees contribute much to a better understanding between the Corporation, the Faculty, and the industrial world. The Corporation, wishing to publish and emphasize reports and transactions of the work of these committees, has asked that they be published in The Review. Many have already been presented and the Visiting Committee Report on the Department of Naval Architecture and Marine Engineering this month continues the series.

VOLUME XXXII of The Review will be initiated with three changes in its staff. JOHN D. CRAWFORD, '27, Assistant Managing Editor, has accepted a position with the General Radio Company of Cambridge, Mass. Although he assumed his new responsibilities several months ago, he continued as a member of The Review Staff until June 30. RALPH T. JOPE, '28, Circulation Manager, becomes Business Manager on July 1, with advertising and circulation — especially dues collection — under his jurisdiction. MISS CATHERINE C. CARLSON, for three years a member of the staff, becomes an Editorial Associate at the same time. For the second time in its thirty years The Review carries in its masthead the name of a non-Technology person, Miss Carlson having obtained her A.B. from Smith. In his departure Mr. Crawford carries with him the best wishes of the entire organization that profited from his effective work and enjoyed his association. The Review also regrets the departure of Miss GERTRUDE L. BUTLER, for four years a member of its staff. Her competency will be sorely missed.

THE Review is not published during the summer months following July. This issue concludes Volume XXXI. Number 1 of XXXII will be published on October 27, and dated November. Readers who bind their copies of The Review are reminded that if they possess eight numbers of Volume XXXI, their files are complete. An index to the Volume will be ready on September 15, and will be supplied post-free upon request.



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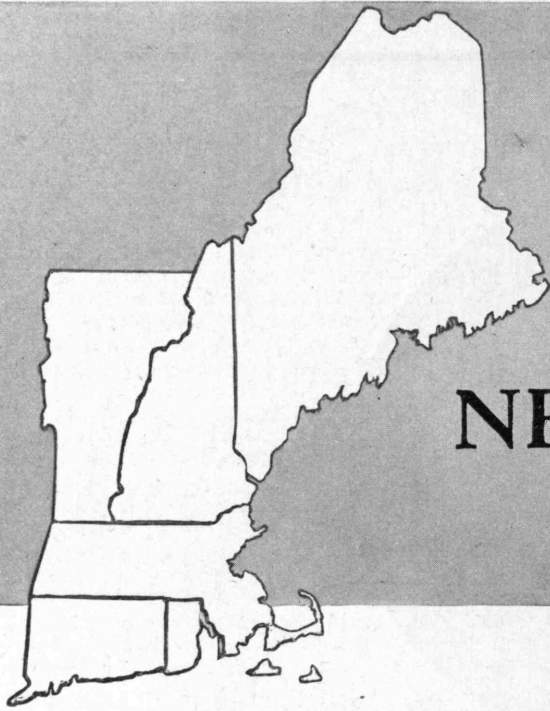
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The TECHNOLOGY REVIEW

VOLUME 31

JULY, 1929

NUMBER 8

PRIMITIVE THINKING

The occult beginnings of authentic science

BY TENNEY L. DAVIS, '13

"*LE MONDE est aujourd'hui sans mystère*" says Berthelot in the opening sentence of the preface to his work on the origins of alchemy. "The intellect claims to clarify and to understand all things and to give them a reasonable and positive explanation. — The notion of the miraculous and supernatural has vanished like a vain mirage, a superannuated prejudice."

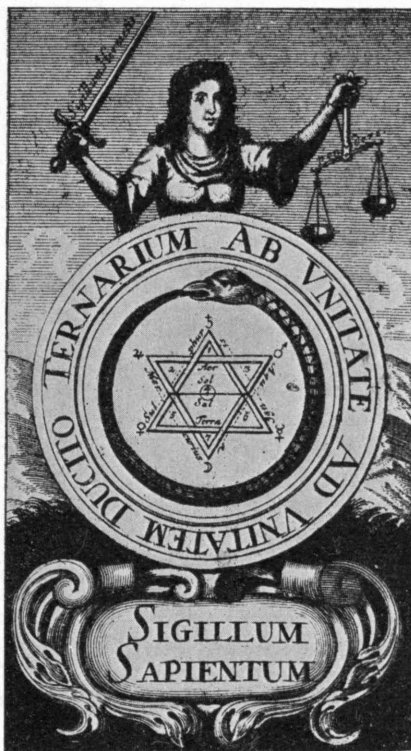
Berthelot's study of alchemy goes back to a time when miracles were common, to a time when science and philosophy had not yet largely rationalized the phenomena of nature, to a time which seems sufficiently remote from the work-a-day, matter of fact, well-ordered world of the present time. But it is possible to go much further back and, for a proper understanding of the development of science, it is necessary to do so. Before there could be any question of what was miraculous and what was natural there must necessarily have been a description and classification of the data, a precise specification of the matter about which the question, whether it was miraculous or natural, was later to be raised. There was first a comprehension of the things before there was any discussion about them. In this article I wish to push the inquiry as far back as possible toward the "blooming buzzing confusion," as William James has called it, of that chaotic "mere experience" out of which the human understanding has emerged. In the beginning there was chaos. In due course and by a process, classifications were set up — the moving shadow shapes of experience were found to possess an order. The process by which this

order was created was the very beginning of science.

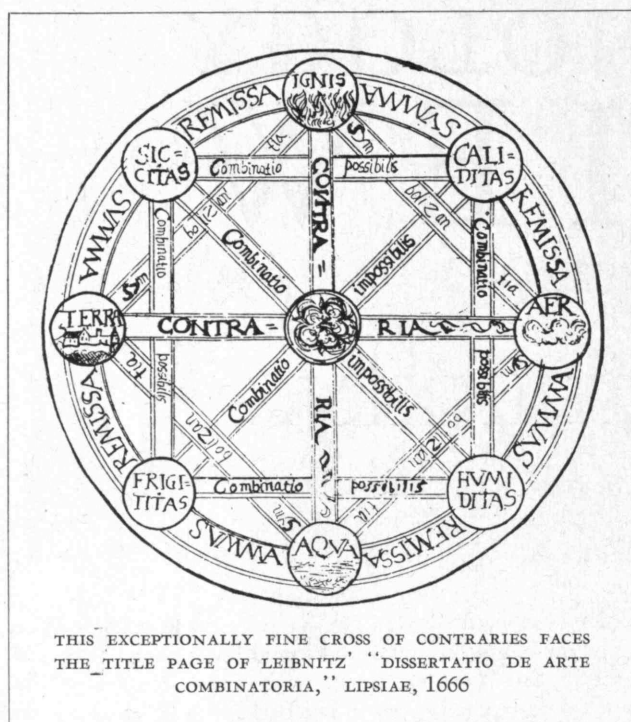
In the beginning mankind found itself confronted, just as each one of us has been, with sights, sounds, odors, with data of the senses. In the beginning these data were without names and without order. They simply happened; they were as they fell out. *Facta sunt.*

Just as a child seeing light recognizes it as similar to light which it has seen before, so man, for some reason or other, came to distinguish certain recognizable recurrences in his experience. These recurrent data, whether named or not, by their recognized similarity were distinguished from all other data and set apart. Two classes of data were thereby inaugurated. Intelligence created its first order — made its first classification — when it divided chaos into two parts, the one part being x , the other part not- x . So also the logicians point out that the beginning of thinking is in the application of the law of contradiction, namely, that a given proposition is either true or false, that a given datum is either x or not- x . Either yes or no. Either is or is not. Either this or not-this. With this principle any chaos whatsoever may be classified, any diverse collection may be subdivided. It is the most primitive and simple — and the most natural — of all intellectual activities. It was the first, the beginning of all science of course, the beginning of all human thinking as well.

Early thinkers were interested in such obvious opposites as active and passive, alive and dead, male and female, positive and negative, hot and cold, wet and dry, and so on. In its



FRONTISPIECE OF "INTROITUS APERTUS AD OCULUM REGIS PALATII" BY EIRENAEUS PHILALETHES, PRINTED AT FRANKFURT-ON-MAIN, 1706. THE WORK WAS ACTUALLY WRITTEN BY GEORGE STARKEY WHO GRADUATED FROM HARVARD IN 1646. NOTE THE SEAL OF SOLOMON, THAT IS, THE TWO INTERLOCKED TRIANGLES; ALSO THE SYMBOLS OF THE SEVEN METALS AND THE SERPENT WITH ITS TAIL IN ITS MOUTH REPRESENTING THE UNITY OF MATTER

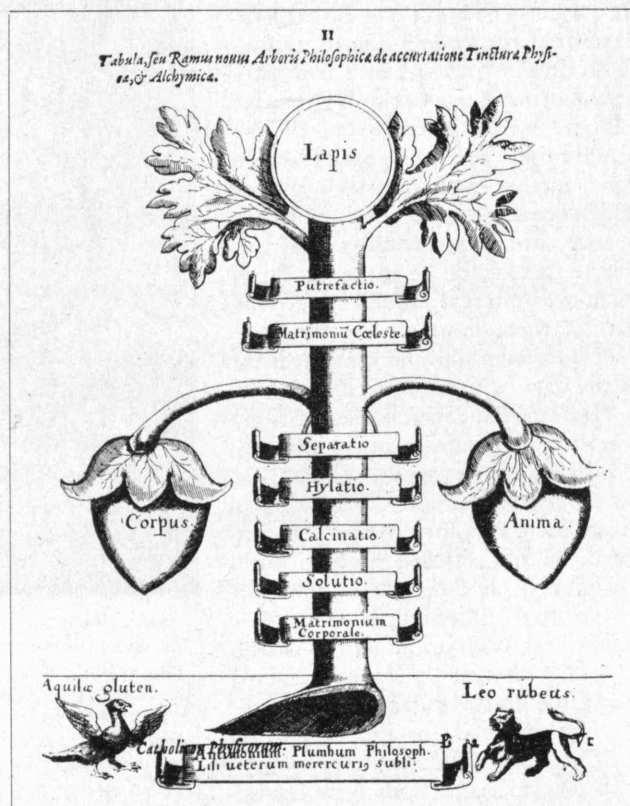


main outlines the first chapter of Genesis is without question a correct account of the beginnings of science. Day was distinguished from night, earth from air, and fire from water. The four so-called "Aristotelian" elements were separated and assigned their places. In the oldest religions of which we have any record, the Sun was regarded as the male principle, positive, hot, active, and so on, and was worshipped as a god, but there was also the female Moon goddess, cold and passive. "The father of it is the Sun, the mother of it the Moon. — Its nurse is the Earth." — as was written in the Emerald Table of Hermes Trismegistus at least as early as the beginning of the Christian era. Yin and Yang have dominated the thought of the Chinese for 2,000 years. Sometimes also the Earth goddess personified the passive principle of fecundity, for the action of the Sun in bringing heat, light, and life to the Earth was apparent enough. In the Eighth Century, A.D., the Arab, Jabir, commenced an epoch in the history of chemistry by teaching that the metals are composed of a positive, active, combustible principle which he called sulfur, and and of a negative, passive principle of substance which he denominated mercury. The sulfur of Jabir was later known by the name of phlogiston, and his ideas dominated the science of chemistry until about the end of the Eighteenth Century.

The distinction of opposites, however, is only the beginning of understanding. It enables us to mark our data and name them, but it gives us no feeling of ease and assurance, no feeling that we know about them. It is necessary to bring them together again. For every pair of opposite terms there is a third, which includes and mediates between them, as the idea of temperature mediates between hot and cold. With a comprehension of the third, we have a real grasp of the opposites; we can handle together the things which we have separated, we know around and about them and have understanding.

One-two-three; positive-negative-neutral. This is the frame upon which must be stretched whatever it is that we wish to understand. This is the mode of all knowing. If we wish to know a man, we must consider him as active subject (What does he think of himself?); as passive object (What do his fellows think of him?); and thirdly, the man as he really is. The philosophy of Hegel is but a reiterated insistence upon the three — the Thing, its Own Other, and the Thing-in-Itself. If we wish to think of God, we are obliged to think of Him as Active Power, as passive object, that is as that which possesses passivity and undergoes the Passion, and thirdly as the Spirit which determines and terminates the action. If we wish to think of electron, the term is really meaningless unless we think of proton, but that term is meaningless too unless we conceive both electron and proton as constituting an atom.

Ancient observers of nature early discovered that the positive qualities of the various kinds of matter could be subdivided into positive qualities of two kinds, that the negative qualities could be subdivided profitably in the same manner, and accordingly had two positive and two negative qualities, or two pairs of contraries, for the description of material objects. Combination between contraries was impossible, hot could not combine with cold, nor wet with dry. Where combinations were possible, the bundles of qualities which resulted were elements, and such elements for many centuries were found to be adequate for the description of natural objects. The qualities, hot and dry, were embodied by the element, fire; their opposites, cold and wet, were embodied

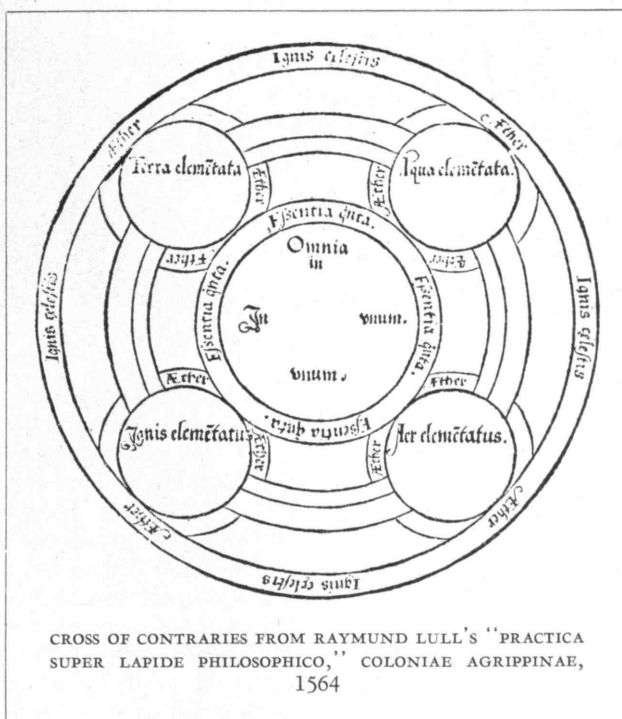


SYMBOLIC ALCHEMICAL DIAGRAM FROM THE "CATHOLICON PHYSICORUM" OF SAMUEL NORTON OF BRISTOL, FRANKFURT, 1630. NOTE THE USE OF THE IDEAS OF THREE AND SEVEN

by water which was the opposite of fire. Earth was cold and dry, while its opposite, air, was warm and moist. The Aristotelian doctrine thus taught two pairs of contrary qualities and two pairs of contrary elements, a teaching which submitted to very pretty geometrical representation, as the "crosses of contraries" in early works on science abundantly testify. Just as a single pair of contraries has a mediating third, so the two pairs, the four terms, have a corresponding fifth. Plato called this fifth term Logos (God or Reason) while the mediaeval scholastics called it *quinta essentia*, fifth being or quintessence, and sometimes confused it with the Philosopher's Stone.

Whoever understands one-two has begun to assemble his information. Whoever understands one-two-three knows the structure of knowledge. These truths are simple and old, very old, so old indeed that mankind has largely forgotten them, so simple that we follow the procedure instinctively without giving heed to the process. They are so deeply imbedded in the mind of the race, so firmly fixed below the ordinary surface of consciousness, that they are hidden or occult. They are the beginning of occult science, in particular of that occult number theory which has been named after Pythagoras but which actually is as old or older than recorded history.

If one-two-three represents knowing, we may know about knowing by treating this one-two-three in the same way that for purposes of ordinary knowing we treat the single datum. So, it seems, the ancient thinker probably reasoned. Just as for any single term, which



CROSS OF CONTRARIES FROM RAYMUND LULL'S "PRACTICA SUPER LAPIDE PHILOSOPHICO," COLONIAE AGRIPPINAE, 1564

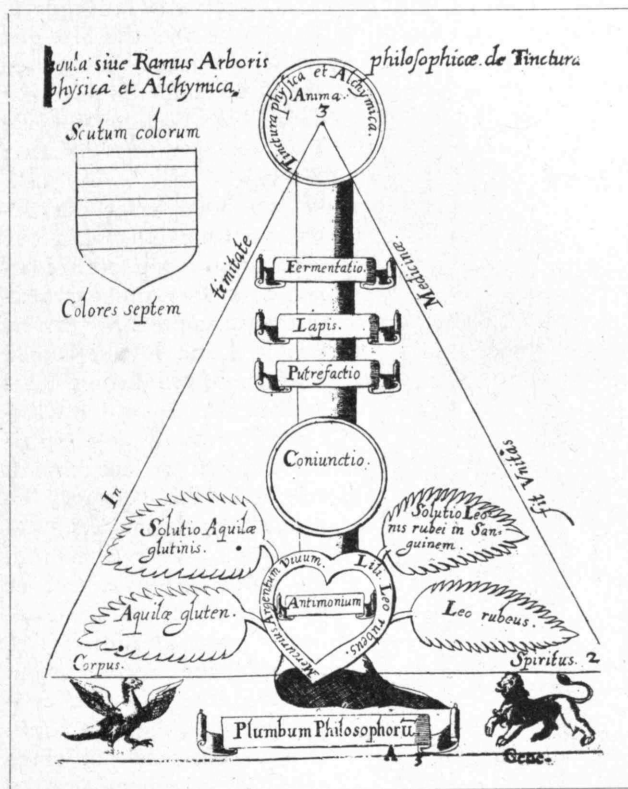
may be regarded as positive, there is a corresponding negative, and for the two there is a neutral third; so for this single triad there is a second and a third, and the three triads represent knowledge about knowing, thus:

	Positive	Negative	Neutral
First or Positive Series	1	2	3
Second or Negative Series . .	4	5	6
Third or Neutral Series	7	8	9

The number seven here occupies the significant position of the first member of the third or mediating series. Whoever understands seven is on his way to knowledge about knowing. Whoever understands nine has attained it. The numbers three, seven, and nine, are therefore particularly important in all human affairs. Since a knowledge of knowing is all that man can wish or hope for, and since nine represents it, ten stands for something beyond the reach of human endeavor. Ten is the divine number, the number of the Commandments of God which Moses brought from the mountain, the number of the Orders of the Blessed in the Kabbala.

The years of a man's life are traditionally set at three-score years and ten (7×10). The first seven years are his childhood, the second seven his boyhood, and the third seven his youth or young manhood. When he has lived for twenty-one years (3×7), he attains his majority and becomes a man. The forty-ninth year of his age (7×7) is the time of the "lesser climacteric," a critical period in his life. And the sixty-third year (7×9) marks the "grand climacteric," a very dangerous time. If he survives it, he will live out all the years which have been allotted to him.

We have seven days in the week, though it is apparent that the number is arbitrary and a matter of tradition. On the seventh day God rested from his labors — and found them good. There are seven heavens in the Mohammedan theology. The ancients had (Continued on page 484)



SYMBOLIC ALCHEMICAL DIAGRAM FROM THE "CATHOLICON PHYSICORUM" OF SAMUEL NORTON OF BRISTOL, FRANKFURT, 1630. AGAIN NOTE USE OF THE IDEAS OF THREE AND SEVEN



NAVIGATION ON THE TIGRIS AT BAGDAD

EARLY in the morning of August 18, 1927, the Italian steamer, *Sardegna*, dropped anchor at Beirut. After disembarking and arranging for transportation eastward through the office of one of the numerous sons of that enterprising gentleman, Thomas Cook, I amused myself in trying to escape from the thousand and one different kinds of "squeeze" that one encounters in countries east of the Mediterranean Sea. At the request of the Persian Government I was on my way to that country to act as petroleum advisor to its government. As an avocation of escape I welcome this opportunity to write of my experiences as a traveler on that mission and to eschew mention of my experiences as an advisor. Of course, there is, as advisor, much about which I might write: obstacles encountered, technical and political questions tackled and solved, laborious office work, advice to ministries, the framing of proposed oil and mining legislation, the story of the Semnan and its cleverly concealed enterprises, oil schemes, stratagems, and conspiracies. I might tell of the many cordial invitations from Persians to join with them in true Persian style, with or without forks and knives, with or without tables and chairs. I might describe the blemishes, virtues and vices, advantages and disadvantages of Tehran. I might even write a book on the intricacies of Persian politics and their effect on world politics and the Middle East developments.

But these I am foregoing that I may indulge in a literary interlude unimpeded by weighty matters. I proceed, therefore, with an account of my journey.

Leaving Beirut in a touring car belonging to the Nairn Eastern Transport Company, I made the ascent of the Lebanon Mountains from which, at a height of 5,000 feet, I viewed the placid blue sea. Then descending, I passed enticing vineyards to the Plain of Coelesyria, crossed the Anti-Lebanons, and arrived at the historic bazaars of Damascus before dark.

WANDERINGS IN

*Experiences of a Petroleum
and*

BY FREDERICK

With a certain regret at leaving this attractive city, I boarded a spacious six-wheeler automobile for Bagdad, the City of the Caliphs, some three hundred and fifty miles away. The irrigated valley grew more and more barren as we crossed the low plateau with its slightly higher cappings of basalt, till we reached the real desert, without a sign of civilization other than the rest-house of Rutbah which looked for all the world like the desert stronghold so vividly described in "Beau Geste." This route saves several weeks of travel in comparison with the Red Sea route which is so uncomfortable in midsummer. I was cheered on this route, however, by having pointed out to me in the desert not far from the international frontier between Damascus and Bagdad the place where desert bedouins occasionally intercept motor caravans.

I stopped to call on the Forty Thieves in Bagdad and then left by rail for Khanakin near the Persian frontier. This is the site of the recently completed refinery of the Khanakin Oil Company. Again we went through customs and filled a touring car and a truck with my luggage. Most important in my hand luggage was the Flit gun which the agent had insisted that I take. In the next few days I had occasion to give thanks many times for that Flit gun.

Two hours after our departure from Khanakin our journey, so auspiciously commenced, was unceremoniously interrupted. My driver, Sub Rie, and I were turned into one of the dirtiest quarantines in the world at Kasri-Shirin, just inside the Persian border. For four days, in company with Persians, 'Iraqis, Near Easterners, and Europeans, we sweltered in the half-shade of a tent or promenaded, pajama-clad, under police supervision through the town's main street to the miniature willow grove on the river bank. This was the only spot where even partial relief could be found from the terrific heat of 120° F. in the noonday shade. Five nights we slept on cots



RUINS OF TEMPLE OF JUPITER, BAALBEK, SYRIA

THE MIDDLE EAST

Engineer in the Country of Darius Xerxes

G. CLAPP, '01

set on sun-baked gravel, guarded by a police station on one side, a Moslem cemetery on the other, and a barrier gate before us. On the fifth day this gate was raised to allow us to enter Persia. Leaving behind the ruins of old Kasr-i-Shirin, we ascended the Paitak Pass and crossed the fertile valley of Karind full of green grass, harvested wheat, and occasional vineyards.

We made several stops to inspect historic sculptures at Takt-i-Bostan and Besitun before we reached Tehran at the end of August. The following morning I was furnished with an office and commenced work as petroleum advisor to the Imperial Government. Not many days were required to make the discovery that the "*mañana*" of South America is insignificant compared with the "*pas-farda*" (day after tomorrow) of the Persians. Some philosopher has remarked that any person who goes to Persia must either have learned patience before going there, must learn it while sojourning there, or will sojourn and leave the country without having learned it. Fortunately, my Chinese experiences had taught me a certain degree of patience, and I made the best of a situation without attempting the proverbially impossible feat of hurrying the East.

After many weeks of aggravating delays, a departure was made from this plateau city of Tehran for the low regions of the Caspian coast. We crossed the magnificent Elburz Range at an altitude of 8,000 feet and then descended to Sary and Bander-gaz. At this last named place the American railroad engineers under William B. Poland, '90, Administrator General of Railways, had constructed some fifty kilometers of good grading before the German syndicate took the work from them.

Eastward, over poor roads, we went into the heart of Astrabad Province, to visit Astrabad City, Gambad-i-Kabua, and the seat of the ancient kingdom of Gurgan, with its extensive ruins. The return to Sari and Barfarush



ONE OF THE IMPOSING GATES OF TEHRAN

was made with the greatest difficulties, for winter had come, and the automobiles were frequently mired. I changed my mode of transport and jogged on for monotonous days on mule back, through the water-covered rice-fields, the forests, and along the shore of the Caspian. It was on Christmas Eve that I reached the city of Lahidjan in the eastern part of Gilan Province. I returned to Tehran, stopping at Rasht and Pahlevi, by automobile on New Year's Day.

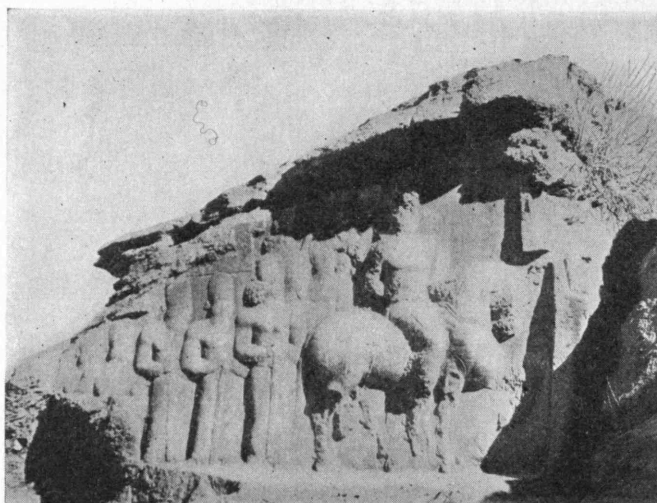
A rule that must be adopted in Persia is never to travel with only a single automobile, for too often a party is stranded miles from a village, out of reach of garage facilities, and without food and water. An extra car loaded with food and spare parts is the best kind of insurance as we proved many times when the cars got bogged, or broke through bridges. During one period of two weeks I recall that one car was obliged to go back over the road every night to hunt for the other which had become stranded because of some new difficulty. It is essential to carry one's cook, and drivers and mechanics are necessary evils. Most travelers take an experienced mechanic and an assistant driver (to whom they pay a salary of about thirty cents a day) in order to have on hand extra labor. I took in addition my secretary-interpreters, Ismail Khan Amir Shah and Farajolah Khan Dehdashti, so that the party consisted of a Dodge touring car, a Graham truck, and eight men besides myself.

When I say that it was not until six months after my arrival in Persia that I was permitted to go on an inspection trip over the oil fields, those persons who understand something of Oriental procrastination will not be surprised.

With Elgin Sherk of the American Mission in Tehran, I left Tehran in March on the Musselman's New Year's Day, leaving behind the snowy Elburz Range, with its high white cone, Demavend, and crossed the Iranian



EAST GATE OF DAMASCUS



LEFT: SCULPTURE DATING FROM 226-241 A.D., NEAR PERSEPOLIS, PERSIA. RIGHT: BACK-COUNTRY MEANS OF TRAVELING: NORTHERN PERSIA

Plateau at an altitude between 3,000 and 5,000 feet. We found the city of Ispahan, famous in Persian history, and the fictitious birthplace of James Morier's character, Haji Babi. Four days later we entered Shiraz, the former home of poets.

During the long journey, hunting was a daily distraction, and Amir Shah kept us well supplied with partridges, ducks, pheasants, gazelle, and other game. I had gained an early reputation for myself by bagging a fine gazelle outside of Tehran, but the Persians usually hunt gazelle by running them down with an automobile.

My decade-old ambition of viewing Persepolis, the magnificent capital of Darius and Xerxes, which was destroyed by Alexander the Great 2,258 years ago, was now realized. We found many fascinating antiquities, bringing to the imagination the splendor and power of ancient Persia. Thousands of feet of movie film were taken of historic spots, archaeological remains, bazaars, street scenes, sheiks, and veiled women.

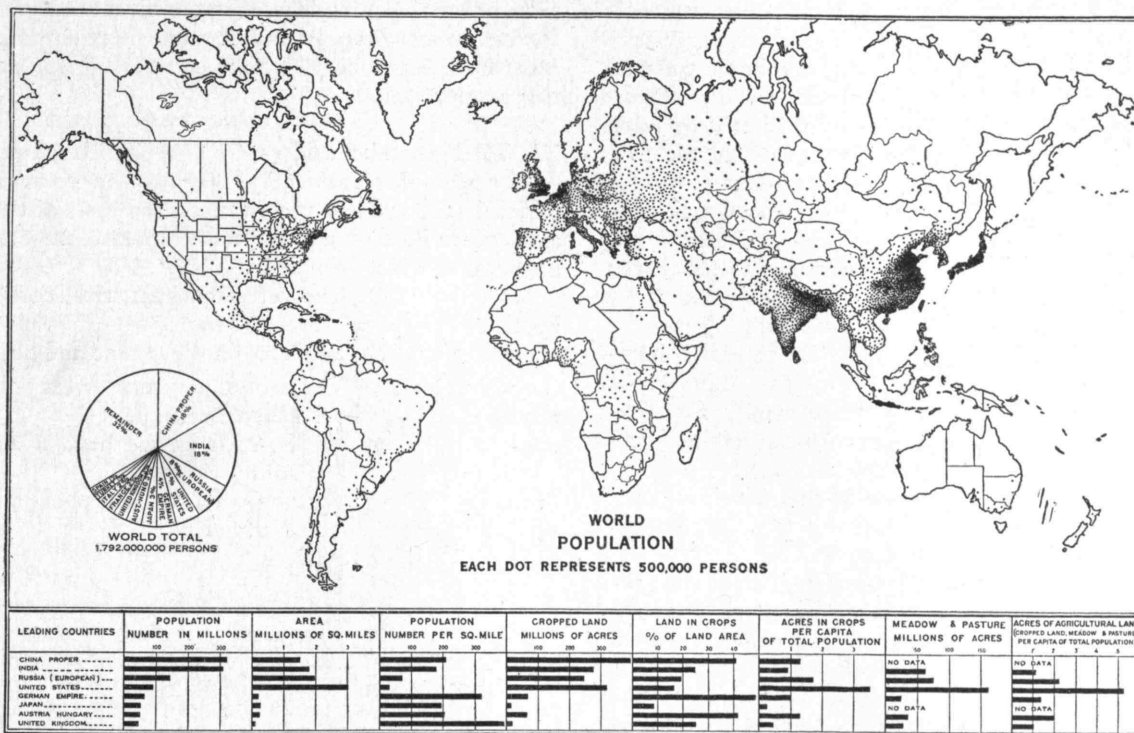
Forty miles west of Shiraz, on our way to Bushire, we encountered the astounding descent of the "ladder." From a high divide where the highway dropped 3,000 feet in elevation in about three miles horizontally to the

valley of the Tang-i-Chikan, there is one of the crookedest and most dangerous series of hairpin bends in the world. Sometimes as many as a dozen parallel roads of this series could be seen one above the other, and on many of the bends the cars had to be backed in order to prevent running over the edge to drop many hundreds of feet vertically. Two other ladders were descended before the low country was actually reached, and then miles of "gach" or gypsum deposits were traversed before we reached Bushire.

The oil district of Persia and Mesopotamia comprises a belt of perhaps 150 miles width, extending southeast for 600 to 1,000 miles from Mosul in northern Iraq to some unknown termination in southern Persia. The localities developed for commercial production are at Baba-gurgur near Kerkuk, the Naft-khaneh field south of Khanakin, the Masjid-i-Suleiman field northeast of Ahwaz, and the more recently discovered Haft-qel field east of Ahwaz. By far the most productive field is that of Masjid-i-Suleiman, which has yielded all of the oil exported from Persia to date, amounting to over 240,000,000 barrels at the end of 1928. At Bushire I found myself guest of the oil company and no detail of hospitality (*Continued on page 485*)



LEFT: A VILLAGE POTTER, NORTHERN PERSIA. RIGHT: MAZANDARAN RESIDENCE ON THE PLAIN OF THE CASPIAN SEA



After Finch and Baker

THE WORLD'S FOOD

Will the Malthusian threat of famine continue to be frustrated by science?

BY SAMUEL C. PRESCOTT, '94

IT IS easy to understand why from time immemorial the problem of food supply has occupied the mind of man since it springs from one of the most primal of man's instincts, hunger. To satisfy the desire and the need of food the savage moved his habitation from hunting-ground to hunting-ground, depending on the meat, fish, or wild fruits and plants that might be found, and later developed his primitive agriculture to guard against starvation. Such conditions may be found today in some of the more remote districts of interior Africa. Wars have been waged for food, and the instinct of self-preservation motivated the migrations of man as well as of lower creatures. At a much later period the production of food became a domestic industry engaging man's entire attention, and exchange of foods between neighboring people by barter constituted one of the early forms of trade.

From some such simple beginnings has arisen one of the most important,

complex, and interesting of the social and economic problems of the present time — the world's food supply. Here is a problem not only personal and of immediate interest, but one the ramifications of which extend into many phases of national and international welfare, and

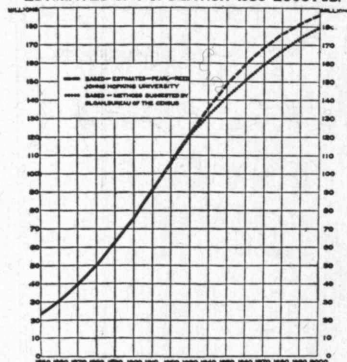
which is intimately intermixed with the movements and numerical changes of populations, with the developments of science, and with that inexorable factor in the fate of civilizations, time.

In a superficial way, and from the standpoint of temporary necessities, our vision of the problem changes from time to time, depending on those elusive factors which we call world conditions. As we recall the meatless and wheatless days of a little over a decade ago and compare them with the present days of agitation regarding farm relief, price fixing, control of surplus, and the other phrases which enter so frequently into the lengthy discussions of the moment, we are brought to the conclusion that in a few



THOMAS-ROBERT MALTHUS

POPULATION OF THE UNITED STATES 1850-1920
AND
ESTIMATES OF POPULATION 1930-2000 A.D.



brief years the barriers of a reputed impending food shortage have again been pushed back. The dire calamity predicted by Malthus in 1789 and to a lesser degree by Sir William Crookes a hundred years later, is still too far in the future to cause grave concern.

The scientist, however, thinks and works not merely for him-

self and the momentary need but, with the spirit of genuine altruism and human service, he must perforce envision a future which in the life of the individual may be remote but in the life of a nation or of a civilization is, in scriptural phrase, but a day.

In order to foresee and estimate certain trends for the future we must review the story of food supply for the period of our national life. At the end of our Colonial Period, before the steamboat and the railroad had begun the contraction of the globe, man lived almost as he had lived for a thousand years. The Industrial Revolution had begun in England, and to some extent the change was felt in other parts of Europe and even in the Colonies, but the arts of peace were still largely small-scale domestic arts. Invention had scarcely begun to modify the methods of labor; food supply was still largely a matter of individual effort and manual labor. It is not surprising that a man of the mental capacity of Benjamin Franklin should have found these conditions worthy of discussion and analysis, for to him belongs the credit of the first modern treatment of the relation of population to food supply. He was followed shortly by Hume and Wallace in Great Britain, and later by Townsend. In 1798 the thoughtful and pessimistic Malthus, noting the force of their arguments and the public disinterest in them, felt impelled to elaborate this doctrine, to call attention anew to the relation between population and subsistence, and to the dangers that were certain to follow the unrestricted increase in the numbers of mankind.

In 1800 the population of the known portion of the globe was, as nearly as can be estimated, about 750 millions, probably half of it in China, the home of real agriculture. Cities were relatively few and small. New York had but 60,000 inhabitants, although London was even at that time a city of a million souls. In America the population had hardly begun to stream into the great central valley but was almost exclusively on the Atlantic slope. The West was *terra incognita*. Canada, aside from the valley of the St. Lawrence, was a frozen blank; Australia, a mystery. Other parts of the globe, now of great significance from the standpoint of food supply, were then of no importance in this respect.

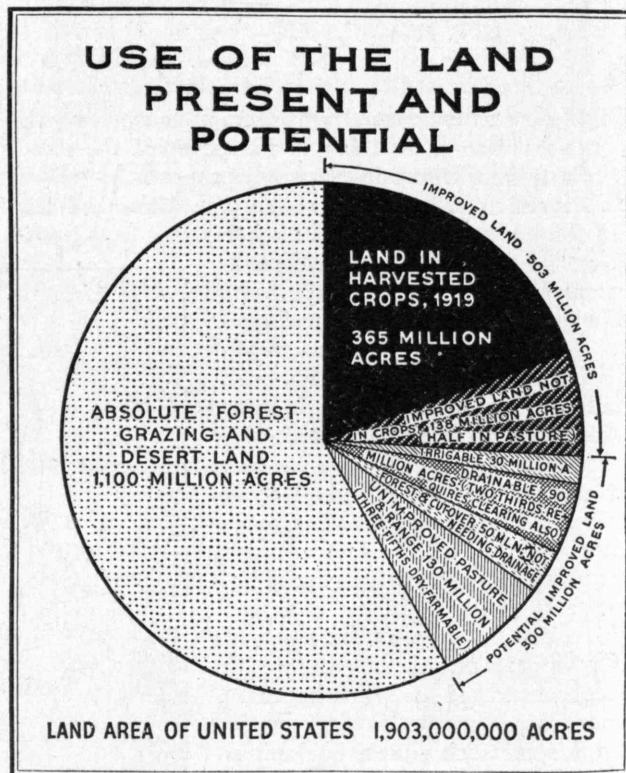
The conditions of a hundred years ago form a striking contrast to the conditions of today, with more than half of our people living in cities; with railroads, steamboats, automotive vehicles, and airplanes as rapid means of transportation; and with the telegraph, the telephone,

and the wireless for instantaneous communication between distant points. These factors have vitally affected the equation of supply and demand. Furthermore, new areas have been opened up for cultivation, for exploration and migration.

IN THE general consideration of a world food problem our thoughts inevitably turn to the great staples which have for many years formed the basis of the diets of civilized man. We may tabulate these staples into two relatively simple lists:

- | | |
|---|--|
| Foods of
plant origin | 1. The cereals: wheat, rice, corn, oats,
rye, and barley |
| Carbohydrates,
proteins, and
oils | 2. Sugar: from sugar cane and beets |
| Foods of
animal origin | 3. Vegetables: potatoes, sweet potatoes,
cassava, beans, peas |
| Proteins, fats | 4. Fruits: such as the banana and the
plantain |
| | 5. Meats: including beef, pork, mutton,
and poultry |
| | 6. Dairy products |
| | 7. Fish and seafoods |

Perhaps the one food universally considered as essential is cereal, but the importance of the other foods depends largely on the food habits of the individual. These habits have been developed in part through necessity, but national nutritional characteristics have grown up largely on the basis of the abundance of the foods most utilized or most easily obtained. Hence we find that the greatest per capita consumption of meats is in those countries like the Argentine, Australia, and the United States where meats have been abundant and relatively cheap.



After Finch and Baker

Temperature range, rainfall and its seasonal distribution, the amount of sunshine, and soil conditions, all impose their limitations, especially on the types of food plants that have not been bred for adaptability to special conditions. They may make the difference between a safe crop and a highly speculative one. The biological principles of adaptation to environment, a natural law which man has to quite a marked degree modified through scientific application of Mendel's law, controlled the agricultural situation throughout the world until science, as well as invention, was brought to bear upon its problems. According to the Malthusian theory, the human race should have been reduced to starvation before this or else it should have become static in population. Placed in a rough chronological order, the series of events from 1880 to our own day which have reduced the gravity of the problem as Malthus saw it are here rehearsed.

In the first decade of the Nineteenth Century came the highly important discovery of a new method of preserving foods by heating them in closed containers. Thus was born the canning industry, today such an important factor in food supply. By its development the abundance of one region is available for the scarcity in another. It has made possible exploration in remote and unproductive parts of the earth, thus providing for a more varied diet and helping to fight disease. Waste and loss have thereby been greatly reduced.

The second great factor came in the field of invention. While the steamboat and the locomotive made possible more rapid and economical transportation of foods, it was the development of farm machinery that made extensive cultivation possible. A recent writer in the *Atlantic Monthly* has asserted that by the increase in machinery and the more scientific methods of agriculture there is now a surplus of farmers amounting to possibly 800,000 out of our total of six and one-half millions. He is inclined to think that the cry, "back to the land," should be changed to "back to the factory."

One other field of invention which has had great influence on the food supply from the consumer's standpoint is the development of artificial refrigeration. In

addition to preventing needless waste of food materials, it is far more important as a practical method of preserving food for transportation by means of refrigerator cars or ships. This process was made effective in 1877 when the first successful shipment of frozen beef crossed the ocean. Recent improvements in quick freezing as applied to fish, meats, fruits, and vegetables, seem to indicate that our common methods of cold storage

may be completely revolutionized. With the newer processes of freezing in which ice crystals of microscopic size are produced, the damage to cells is extremely small, and changes in flavor are almost entirely prevented.

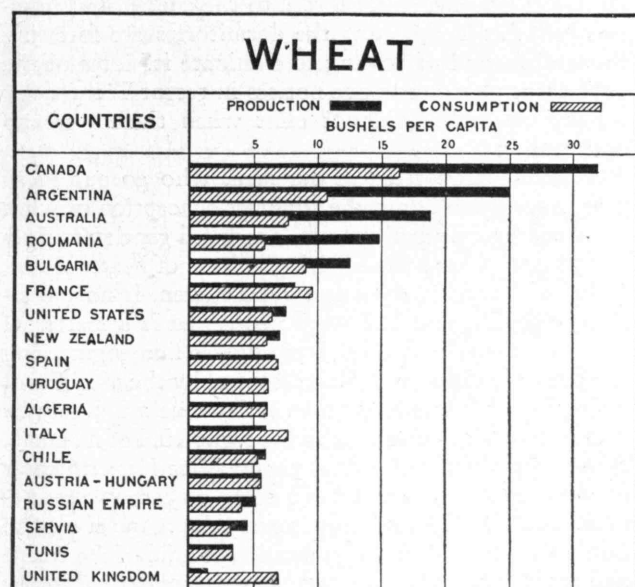
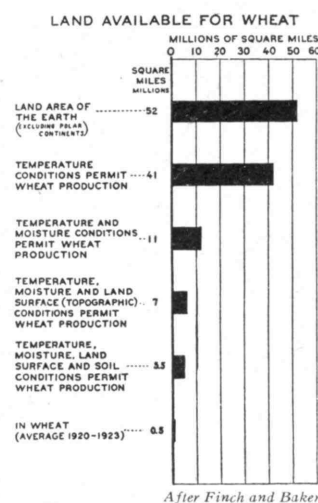
The introduction of chemical fertilizers to replace the materials removed from the soil, and the processes of crop rotation and fallowing have helped to conserve and increase the food producing power of the land. The discovery and development of methods of fixation of atmospheric nitrogen, transforming it into compounds which can be directly utilized by plants, has also great possibilities as a factor in securing larger yields per acre due to a more carefully controlled condition of the soil. Hybridization and selection have extended the land areas available for cultivation to an enormous extent.

I shall mention but one more of the factors by which man has been able to increase the quantity and security of his food supply. Preventive medicine as applied to human ills has no more perfect examples of the scientific method of investigation than may be found in some of the work carried out by the bacteriologist and the mycologist in the study of the diseases of domestic animals and plants which are so important in our food supply. The prevention or control of such disease as bovine tuberculosis, Texas fever and swine plague, among animal diseases, or of the mildews, rusts, blights, and the destructive action of many forms of insects has a greater significance than we are accustomed to ascribe to it.

THE World War showed us that the nations of the world fall into two classes with reference to food supply — those which are self-sustaining, and those requiring food in some quantity to be imported from other countries. The only countries producing enough wheat for export are the Argentine, Australia, Bulgaria, Canada, Roumania, Russia, and the United States.

	1897-98	1927-28
	Million Bushels	Million Bushels
United States	510	876
Canada	55	440
Argentina	60	239
Australia	38	109
Russia in Europe	230	All Russia 750

(Continued on page 488)



BE A SNOB

Further comments on a recent controversy

BY ROBERT E. ROGERS

ON THE evening of Saturday, June 1, I spoke to the senior class of Technology at their last dinner together. I spoke impromptu, and with my usual freedom, letting the chips fall where they might, on "The Necessity of Being a Snob." So far as I knew, there were no reporters present. A senior class dinner is usually of no news value. But there was a reporter present, and a good one, too. The result you probably are all aware of. So far as I can make out I rated the front page for a day or two in most of the newspapers of the United States, as well as editorials, special articles and letters to the press. As one graduate wrote me, "I have never seen M. I. T. mentioned so much since I graduated."

For the past two weeks I have been receiving hundreds of letters. A great many Technology men have thoughtfully written me, enclosing clippings so that I can gauge pretty well the geographical distribution of the story. It is literally nation wide. When the letters began to come the reactions were almost mathematically fifty-fifty of praise and blame. Since then, the letters have swung strongly towards approval, particularly from Technology men, from educators who have sensed exactly what I meant, and from people whose letter-heads, style of writing, and so on, show them to be professional men, employers of labor, men of substance in their community. A surprisingly small number have been downright abusive, profane and indecent, and in those the quality of letter paper, the orthography, and grammar indicate that the writers do not matter.

One reaction is of interest to Technology men. A member of the Boston school committee took occasion to spread himself on the records to the effect that I had disgraced the name of Rogers in violating the principles of the founder of the Institute. A few days later a relative of William Barton Rogers very kindly wrote an open letter setting the gentleman right about President Rogers' antecedents, mode of life and ideals, and assuring him that William Barton Rogers would have approved. Later I learned that the school committeeman was on record as having objected to setting up special classes for brilliant students in the Boston schools, on the ground that in a democracy there was no place for an aristocracy of brains. The entire episode is a perfect comment on what I was trying to say.

The whole controversy centers, of course, around the word snob. In dealing with Institute men I have always found it desirable to be pointed, specific and extreme in my language, on the principle that one makes allowance in shooting at a mark in a high wind. It does no good to look up the dictionary definition of Snob, or that popularized by Thackeray. In America the word Snob in universal popular use means "one who thinks himself better than the average and behaves on that assumption," which means that any appearance of superiority will call forth that epithet from people who know no better.

With that definition in mind I stand by my guns. I want Technology men to remember that each one of them is the sole survivor of one hundred boys who started in the public school system with them and have dropped off. I want them to remember that each one of them represents an enormous amount of money, time, energy and patience spent on him. They should, obviously, represent an intellectual aristocracy.

The American world of the man in the street is increasingly a world of vulgarity and low ideals in speech, manners, taste and ideas. Our magazines, our films, our popular music, our comic strips, our advertisements show that without question. It is very easy to be submerged in that world. And the college man seems almost to make a point of being submerged in that world as completely and quickly as possible, as if he were afraid of being recognized as being in any way different or superior. He gives, only too often, no outward signs of being superior. One is moved to exclaim with Percy Marks, "If you are the cream, God help the skimmed milk!" And if the college men are not the cream of the community, then our educational system has failed.

I said this to a Technology crowd, simply because I know Technology men well enough to say it, and not because a Technology undergraduate crowd *en masse* is noticeably below par in this matter of putting up what I called the "front" of a gentleman. Undergraduate manners in our colleges are getting worse instead of better. There is, in the corridors and classrooms, in the great meetings and elsewhere, a distinct increase in loudness, bad manners, vulgarity and baseness of speech and bearing. I am inclined to think that this is true in our colleges everywhere. I have observed it at Harvard as well, but it affects me more intimately and more painfully at Technology. I am reluctantly forced to the conclusion, however, that at Technology the dormitories are fostering this evil instead of helping to eliminate it. Some of the unpleasant phenomena one notices in recent Technology undergraduate life did not exist when there were no dormitories.

A certain proportion of our men, who go out every year, have literally not the slightest conception of what the word "gentleman" means. The word gentleman does not primarily have to do with goodness of heart, ethics, and the like. A good man, a good citizen, is not necessarily a gentleman. The word gentleman is a matter of manners, taste, and good breeding. A fine engineering mind may be disastrously handicapped by the manners of a rough-neck and a low brow. A less fine mind may be carried to desirable success by the right kind of manners, those that attract influential people. One Harvard sneer at my talk was that you can't make a synthetic gentleman. You can! Harvard does it every day. And it works. I only wish that Technology would get hold of the recipe and try it out.

A TECHNOLOGY DIRIGIBLE

Round Hill Experimental Station to use the Goodyear dirigible "Mayflower" for fog and radio research

BY EDWARD L. BOWLES, S.M. '22

SEVERAL years ago Colonel E. H. R. Green made it possible for the Institute to establish on his estate at Round Hill, near South Dartmouth, Mass., a radio communication experimental station which has subsequently been designated as W 1XV. The work of this station has become particularly well known by virtue of its communicational aid during the Vermont flood, during the flight of the *Graf Zeppelin*, and after the sinking of the *Vestris*. It has not only played an active part in such emergencies but it maintained scheduled contact with MacMillan on his Polar expedition, the Byrd Expedition, and the ship *Carnegie*, and in addition has acted as an amateur relay station in communication with an important army station in the Philippines, taking traffic for local families of the soldiers.

Realizing the importance of existing aviation problems and their relations to radio research, Colonel Green decided to alter his estate so that it would in time become an airport second to none, suited to non-commercial work and investigation, and a research station where ideas could be expeditiously tested. The development of this field receives a great impetus with the offer of the Goodyear-Zeppelin Corporation to station at the field and put at the disposal of the Institute the non-rigid dirigible, *Mayflower*, which has recently been christened. This offer by Paul W. Litchfield, '96, President of the Goodyear-Zeppelin Corporation and of our own Alumni Association, is to be definitely consummated, upon the completion of hangar facilities built by Colonel Green and Round Hill airport will boast of its first airship dock. In fact, this will be the first one in New England. Above all, it is to be the sole base of the summer's operations of the Goodyear air-vessel in New York and New England territory. To Colonel Green's enthusiastic cooperation must be attributed the consummation of this project.

Few people are probably cognizant of the extensive equipment and work now observable at Round Hill. To house the operating group of research assistants, the Institute has been tendered the use of a house on Colonel Green's estate, now affectionately known by the research group as the "M. I. T. House." Colonel Green has made it possible for the men to live on the estate the year round, thus being close to the laboratories of which there are now two.

The increased activity this last year made it feasible to begin in a substantial way on the problem of airplane navigation in fog. Realizing the need of basic study, the Institute has been careful to have all work guided with regard to the pure physics underlying various steps. It is believed that the laying of such a solid foundation will lead to consistent and important future progress in such undertakings.

The study of fog, both natural and artificial, has already served to confirm quantitatively certain qualitative results and has led to a closer connection in a practical way of eye sensitivity and light source characteristic. The study is expected to lead to a better knowledge of fog as a medium affecting the propagation of electric and elastic waves of various frequencies, thus shedding light upon the question of propagation of energy through such encumbered space and consequently yielding valuable information on the communication of intelligence through such a composite medium. The ability to communicate intelligence through such a medium coupled with proper control of that intelligence permits the practical consideration of such devices as electric and acoustic altimeters, such problems as code or voice contact, and so on. In other words it is considered important to study the physics suggested in such problems, then practical applications.

In accordance with a project originated two years ago, the Institute will undertake a meteorological program beginning this summer. It is proposed ultimately to maintain a complete weather intelligence station on the estate to be of assistance to itinerant aviators and to bear to the meteorological research work to be undertaken there the same relation as the radio transmitting and receiving station bears to the communications research. The meteorological research program will lead into borderline problems, which work it is hoped will shed additional and new light upon that field of science.

The *Mayflower* of Round Hill will be invaluable in radio investigations above the ground and water. Such investigations as those of energy radiations from antenna, radio-fading as affected by the angle of the receiving point above the ground plane at the transmitter, radio beacon field-patterns and aberrations, and wave propagation associated with composite media such as water and air are only some of the problems which may be attacked with the aid of such a ship.

The coming academic year will find us, among other things, probing deeper into questions of radio wave propagation, fog and its transmissive characteristics, meteorological phenomena, supersonics, and beacon flying, many of which are associated directly or indirectly with the navigation of aircraft in fog. Other aspects of communication will be studied, including the behavior of aerial systems and the problem of frequency standards.

It is a pleasure to pay tribute on behalf of the Institute to Colonel Green for his demonstration of confidence by providing for this expansion of our activities at Round Hill. I may say that the Colonel once remarked that he would feel that this development had been well worth while if the experimental work it made possible resulted in the saving of a single human life.

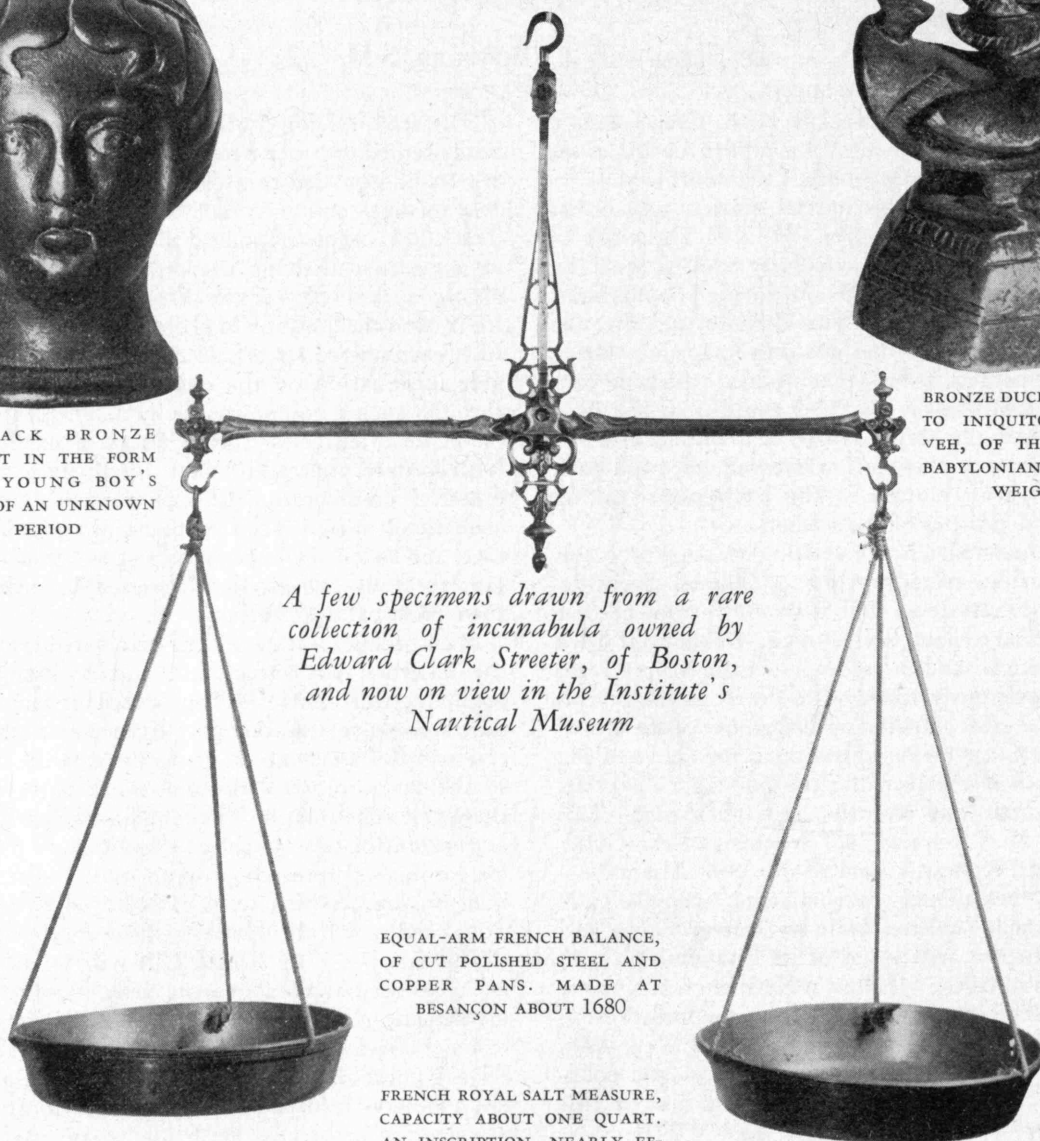
WEIGHTS AND MEASURES OF ANTIQUITY



A BLACK BRONZE
WEIGHT IN THE FORM
OF A YOUNG BOY'S
HEAD OF AN UNKNOWN
PERIOD



BRONZE DUCK CREDITED
TO INIQUITOUS NINE-
VEH, OF THE ASSYRIO-
BABYLONIAN SYSTEM OF
WEIGHTS



*A few specimens drawn from a rare
collection of incunabula owned by
Edward Clark Streeter, of Boston,
and now on view in the Institute's
Nautical Museum*

EQUAL-ARM FRENCH BALANCE,
OF CUT POLISHED STEEL AND
COPPER PANS. MADE AT
BESANÇON ABOUT 1680

FRENCH ROYAL SALT MEASURE,
CAPACITY ABOUT ONE QUART.
AN INSCRIPTION, NEARLY EF-
FACED, ATTESTS TO ITS
LEGALITY

ONE OF THE FEW ANGLO-
SAXON ROYAL HALF-POUNDS
NOT DESTROYED BY QUEEN
ELIZABETH



DISC WEIGHT SIX INCHES IN
DIAMETER. BELIEVED CAST IN
THE ORIENT FOR AN ARABIAN
TRADER





BOOKS



The History of Man

EVOLUTION AND MAN, by Hervey Woodburn Shimer. \$2.60. 273 pages. Boston: *Ginn and Company*.

THIS new book differs from the many that have been published in that it serves to stress the evolution and relationships of lower organisms largely as a basis upon which to discuss that of man in particular. It emphasizes, moreover, not merely the physical aspect of evolving forms but the dawning and development of consciousness as expressed in them, which has its culmination in mankind.

The several parts discuss the evolution of the organic environment, divergence of plants and animals, and their classification. The evidences of evolution are derived from several sources: paleontology, comparative anatomy, ontogeny, and distribution. There follows, then, a presentation of the causal factors of evolution from within and without the organism, including heredity and parasitism. The background being completed, man is now discussed, his physical evolution, ancestry, early records, and the effect of the environment on his becoming. The four instinctive human impulses prepare the way for man's control of his own evolution, for the evolution of service and the expanding consciousness.

The discussion is logical and clear and shows a thorough familiarity with evolutionary thought and discovery, as well as the clarity of presentation of an experienced teacher. The appendix adds much pertinent information — a history of the concept of evolution, the mentality of our nearest simian relatives, and the sources and interpretation of ethnological data, together with the origin of historic races. A brief reading list completes the volume.

The book is well printed, handy in size, and singularly free from error, factual or otherwise. It should be widely read.

R. S. LULL

The Art of Cloking a Troutbe With Colour Tenebrous

MODERN ENGLISH IN THE MAKING, by George H. McKnight and Bert Emsley. \$4.00. 590 pages. New York: *D. Appleton and Company*.

DR. MCKNIGHT and his collaborator make philology interesting to ordinary folks. They do it by observing the truth that language and life are inseparable, the one a function of the other, and by demonstrating that the English language in particular is not yet fossilized, or even suffering from arteriosclerosis, but instead is still vigorously undergoing mutations and growth, particularly here in ungrammatical America.

In his introduction he sets down his purpose as that of attempting "to show the principal changes that have taken place in the English language since the adoption in

the fourteenth century of the East Midland dialect. . . . Effort is made to show the natural tendencies that have affected its growth and at the same time to exhibit the methods employed in its cultivation."

In achieving this purpose in an admirable manner he has incidentally compiled a feast of language lore that ranges from the "finical flaunting phrases and termagant inkhorne terms" of the professors to the bawdy, colorful profanity of the drunks and Falstaffs who have always added, unwittingly though it be, a saving yeastiness to their mother tongue. Consequently both of these classes as well as intervening ones can find conversational sustenance in the book.

Dr. McKnight has probably added little to the archives of the etymologists but he has made these archives available and understandable to people who have no aspirations toward becoming Dr. Syntaxes.

J. R. K., JR.

Bibliomania

THIS BOOK-COLLECTING GAME, by A. Edward Newton. \$5.00. 392 pages. Boston: *Little, Brown and Company*.

MR. NEWTON concerns himself chiefly with a résumé of what may be called the mechanics of book collecting. He summarizes the technique behind the making and binding of books, he suggests some possible lines for the collector to follow, he tells something about the traffic in rare volumes, and in a chapter entitled "*Caveat Emptor*" he warns the novice that some books are valuable and that others, apparently identical in every way, are almost worthless as collectors' items. "This Book-Collecting Game" and "The Amenities of Book-Collecting" (Mr. Newton's first book, which we think is a much better piece of writing) are recommended to anyone who thinks that book collecting is of necessity a game for the idle rich. The two supplement each other.

With the exception of the frontispiece, both the illustrations and the text of the present volume were printed on an offset press from plates prepared by the aquatone process. Instead of printing directly from type, engravings, or electrotypes in the usual way, the offset press planographically transfers to a rubber blanket the inked impression from the aquatone-processed plate, and this rubber blanket is then brought into contact with the paper to which the ink is transferred or "offset." Both outside covers of *The Review* for the past twenty issues have been printed by an offset process. The object of it all is to make possible the reproduction of photographs and other detailed illustration without resorting to glazed paper. The best papers for text matter — best for the reader's eyes and best for the appearance of the page — have a dull surface upon which halftones cannot well be printed by the usual "letterpress" method. The offset process undoubtedly contributes much to the ease of reading a book in which illustrations and text refer-

ences to them are as numerous as they are in Mr. Newton's book. In addition, a pleasing unity of color and mass is obtained; the illustrations appear to be as much a part of the page as the text.

The contention that "This Book-Collecting Game" "is one of the first commercial books to be printed in this manner" seems to be justified because those done in offset that we have seen have been photographically reproduced from earlier editions, thus saving a part of the cost of composition. This one, apparently, was set in type in the usual way and the plates photographically prepared from proofs. This, with the fact that the life of a set of aquatone plates is limited (the pages in our copy of the book from the second printing are noticeably gray and lack the sharp contrast between white paper and black ink that is essential for easy reading), makes this a likely item with which to break into "This Book-Collecting Game."

Mr. Newton not only knows book-collecting and the people who have become famous at it; he has, in addition, a fund of material for yarn spinning and a flair for writing interestingly. He is not always lucid and not always coherent, in the rhetorical sense, but he always makes pleasant reading with a style that is almost conversational in its amiability. He paints rosy pictures of the hobby and he paints them well. Therein lies the danger, for he is insidiously persuasive. Undoubtedly, he makes many casual readers into addicts who (in the jargon of another day) find that they cannot "either take it or leave it alone."

J. D. C.

Blood and Thunder

BANDITS AND THE SOUTHERN PACIFIC, by C. B. Glasscock. \$2.50. 294 pages. New York: Frederick A. Stokes Company.

WHEN San Francisco had a population of less than 150,000 and the Sacramento Valley still owed its prosperity to the mining boom, there lay to the south ten million acres of "desolate land, scorched by the sun through long summers . . . roamed by cattle, coyotes, cowboys and vicious remnants of the gold-rush days—that was the San Joaquin Valley of California in the Seventies." Into it came settlers, "the sandlappers," squatters who undertook to farm quarter sections of government land; and to the cattlemen whose unfenced stock roamed the range untended, the sandlappers were quite unwelcome.

Then the Southern Pacific Railroad built their line through the valley, changing its "vague right of way . . . so to touch and seize the rich lands which were just coming into a clear market value under the sweat and labor of the sandlappers and, the more efficient sheep, cattle and wheat growers of the Eighties."

Mr. Glasscock writes of this exciting struggle of the first two of these three elements in the San Joaquin against the railroad whose high-handedness and monopolistic efforts, supported by its control of politicians, banks, newspapers, and courts, made it cordially hated. It is a connected story of train robberies, bandit chasing and prison escapes bearing evidence of painstaking research into newspaper files and careful weighing of statements by participants, some of whom survived the blood

shedding and are still alive today. However, the incidents he reports formed the basis of dime novels years ago, and, though Mr. Glasscock, as becomes an historian, is restrained in his style, his chapters usually end something like this, "Before the smoke of that byplay of the man-hunt cleared, three more men were to be shot dead and four more wounded."

H. E. L.

Deck Scrubbing and Blackbirding

JOHN CAMERON'S ODYSSEY, transcribed by Andrew Farrell. \$4.50. 461 pages. New York: The Macmillan Company.

ROBINSON CRUSOE'S adventures were only those of a small boy at play on Saturday afternoon compared with the tales of John Cameron in the Pacific Ocean. Shipwrecks, tornados, and cannibals abound in the pages of his long, hazardous sea voyages among the islands of the Pacific.

As a boy of seventeen, John Cameron left Scotland and its too religious atmosphere to become an apprentice seaman on the bark *Ida*. So strongly had he the call of the sea in his blood that neither overwork, scanty food, nor harsh treatment could spoil his delight in the sea. Conditions for seamen in the Age of Sail were somewhat different from what they are now in this Age of Steam. Water was scarce, usually rain-water, bread was often filled with weevils or maggots, and pork was rancid. On long voyages food often gave out entirely, and sharks or turtles were made to fill the entire bill of fare. Sailing meant the hardest sort of manual work in all sorts of weather. The handling of great sails, painting and deck scrubbing were the order of the day, and hours of relaxation were few. Yet Cameron was a sturdy lad and found much to amuse him despite the monotony of long voyages.

The *Ida* was the first of many ships on which John Cameron fought, drank, and swaggered his way around the Horn and back and forth among the islands of the Pacific. Occasionally the lure of lazy life on tropic islands held him for a short time, but always he returned to the wide blue sea where there was room enough to ride out a gale or weather a tornado. He saw the destructive effects of a friendship with John Barleycorn, yet he continued to drink heavily. Blackbirding, or the business of stealing natives for the slave trade, became his occupation for a time, and this nefarious trade was carried on among unfriendly natives by strategic and not always honorable methods. Aids to navigation were imperfect and the constant danger of wrecks made Cameron able to shift for himself in danger, to make quick decisions, and often to use his fists quickly. In spite of the fact that that he lied, cheated and stole to gain his own ends and was a relentless enemy, he was a good friend and a hardy sailor.

His voyage on the *Wandering Minstrel* and its subsequent wreck on a small island forms one of the most interesting incidents in the book. His own remarkable experiences fade before the story of the unfortunate castaway, Jorgensen, with its chapters of shipwreck, murder, and starvation. In the company of Jorgensen and a "young, fat and tender Chinese boy," Cameron made a dash for civilization in a (Continued on page 493)

VISITING COMMITTEE REPORT

Covering the recent meeting of the Visiting Committee for the Department of Naval Architecture and Marine Engineering. Published by arrangement with the Executive Committee of the Corporation

THE Committee * convened on February 2, 1929, at 9 o'clock at Professor James R. Jack's office at the Institute. There were present for the Committee:

A. Farwell Bemis, '93.

Henry A. Morss, '93.

Joseph W. Powell, Chairman.

and for the Institute:

James R. Jack, Professor of Naval Architecture and Marine Engineering, in charge of the Department.

Lawrence B. Chapman, '10, Associate Professor of Ship Operation and Marine Engineering.

Evers Burtner, '15, Assistant Professor of Naval Architecture and Marine Engineering.

Student Attendance: Professor Jack reported to the Committee that the U. S. Navy is now sending six students per year to the Institute for work in Course XIII-A; that of the commercial students there were in the sophomore class eight in Option 1 and ten in Option 2. All of the students in Option 1 and eight of the ten in Option 2 are making satisfactory progress.

Scholarships: The question of additional scholarships was discussed. The Institute would like an additional scholarship to operate in alternative years with that contributed by the American Bureau of Shipping, in order to have one \$500.00 scholarship available each scholastic year. The withdrawal of the Lloyd scholarship will leave Option 1 without this incentive and Professor Jack is anxious that a new one be obtained to replace it. There was discussion as to the advisability of a scholarship for the Doctor's

* The complete roster of this Committee is as follows: Charles A. Stone, '88, 49 Federal Street, Boston; A. Farwell Bemis, '93, Box 5173, Boston; Henry A. Morss, '93, 201 Devonshire Street, Boston; Joseph W. Powell, Chairman, 6 Beacon Street, Boston.

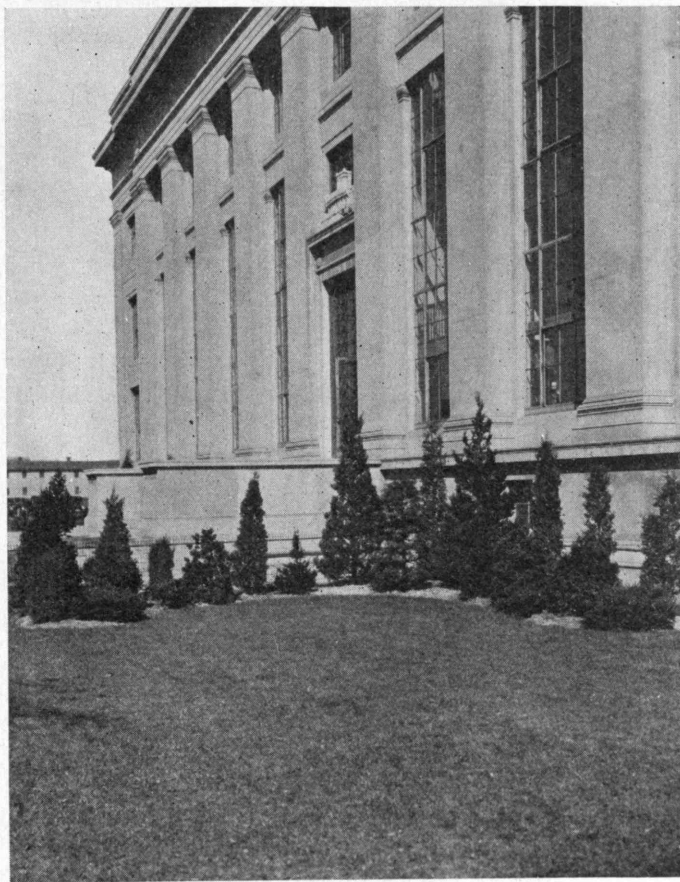
degree. There are numerous possibilities for advanced work, both in the mathematics of ship construction and in the study of general and special designs to meet the requirements of various services. Also the construction of a ship model tank at the Institute would offer many opportunities for valuable contributions to scientific knowledge.

Summer Work: The subject of arrangements desired by the Department to permit students to make a sea cruise was discussed. Professor Jack said that he would not have over two men desiring to go to sea, while Professor Chapman put his maximum figure at four. Stanley Dollar, of the Dollar Steamship Company, has shown interest in providing these facilities.

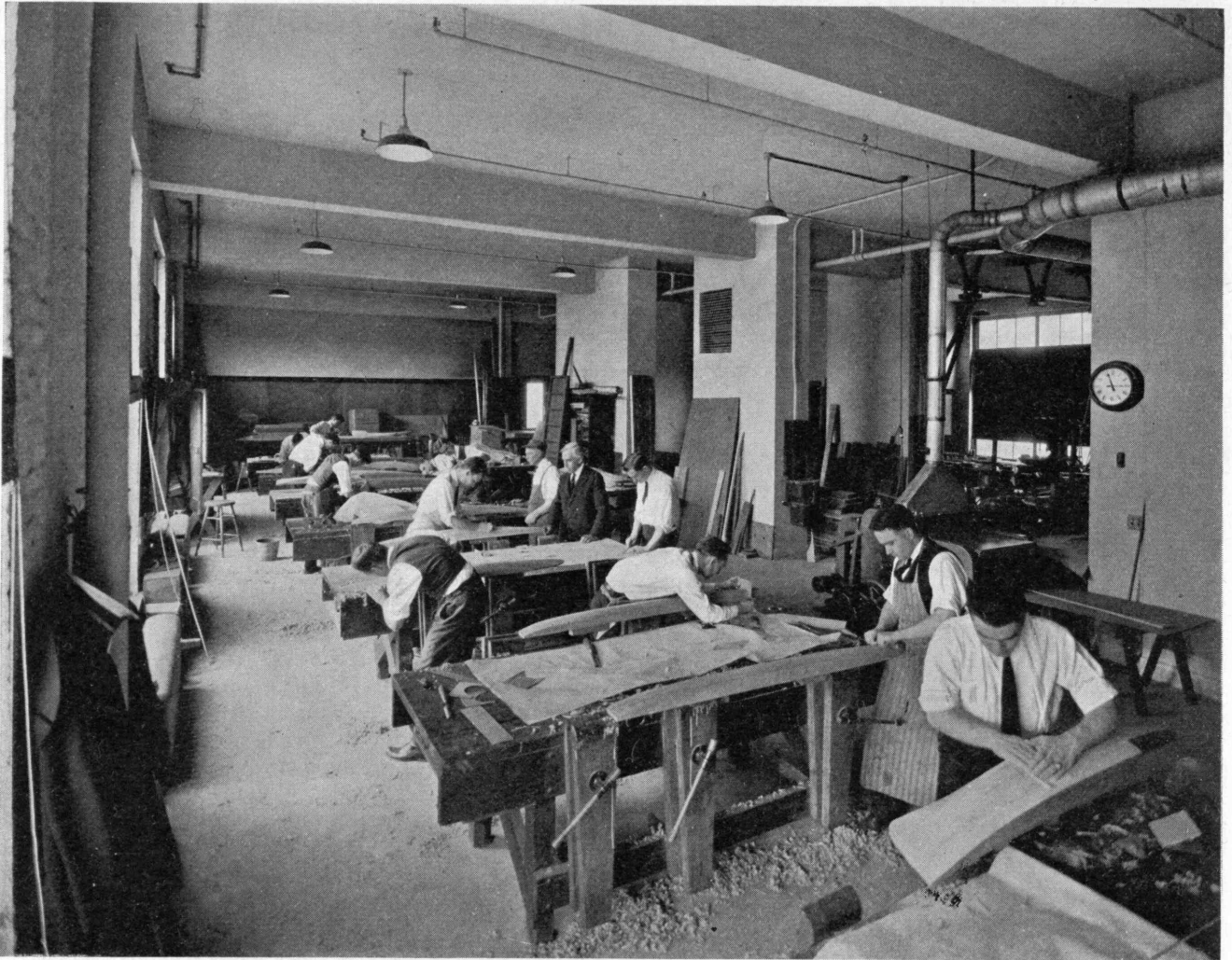
Work of Graduate Students in Ship Operation: Professor Chapman reported that his first graduate student, Gilbert J. Ackerman, '28, has been placed with the Export Steamship Company and has been with them since September, 1928. They are giving him practical experience in different

departments of the Company's business and his progress will be watched with particular interest.

Additional Members of the Advisory Committee: Captain Eugene O'Donnell, who is President of the Eastern Steamship Company, and Edward P. Farley, 11 Broadway, New York, who is Chairman of the American Hawaiian Steamship Company, were suggested as desirable additional members to the Advisory Committee for the Department, and the Chairman was instructed to ask President Stratton to invite them to become members of this Committee. At present there are three members listed as members of the Advisory Committee for Option 1 and thirteen for Option 2. Rear Admiral D. W. Taylor, U.S.N., Washington, D. C., S. W. Wakeman, Vice-President of the Bethlehem Shipbuilding



ENTRANCE TO BUILDING 5, THE PRATT SCHOOL OF NAVAL ARCHITECTURE AND MARINE ENGINEERING



ABOVE: STUDENTS WORKING IN THE SHIP MODEL SHOP UNDER THE DIRECTION OF PROFESSOR GEORGE OWEN, '94. BELOW: ENTRANCE TO THE INSTITUTE'S NAVAL MUSEUM

Corporation, Ltd., Quincy, Mass., and J. F. Metten, President of the Marine Engineering Corporation, Fifth and Cherry Streets, Philadelphia, Penna., are proposed as additional members of the Committee for Option 1.

Spring Meeting in New York: The advisability of a spring meeting of the Advisory Committee in New York was discussed. The work of the Course in Ship Operation has advanced to a point where the actual methods pursued and the results obtained can be described to ship operators and it is believed that such a meeting will stimulate their interest and should bring very useful ideas.

Shipping and Shipbuilding on the Ohio and Mississippi: The rapid strides that have been



made in marine transportation on our inland waterways were discussed. The Committee suggests that the time and effort required to investigate conditions of shipping and shipbuilding on the Ohio and Mississippi Rivers and other inland waterways, with a view to familiarizing the staff at the Institute with these developments and assuring an outlet to our students with firms engaged in these activities, would be time and money well expended.

Proposed Ship Model Tank: Professor Jack discussed with the Committee the plans of the proposed new ship model tank. He stated that this could be constructed for less than \$500,000 and that the President, Dr. Stratton, desired to push this proposal to an early conclusion

as he believed the money could be raised for this new facility. Mr. Bemis wished to suggest a form of construction for the tank which he believes may result in reducing its cost.

Report of National Industrial Conference Board: Mr. Bemis briefly outlined to the Committee the study of the American Merchant Marine in its relation to National Welfare that is being made by the National Industrial Conference Board. He stated that copies of this report should shortly be available and Professor Jack asked that six copies be furnished for the Department, including one for Dr. Stratton. It was suggested that a copy be forwarded to each member of the Advisory Committee.

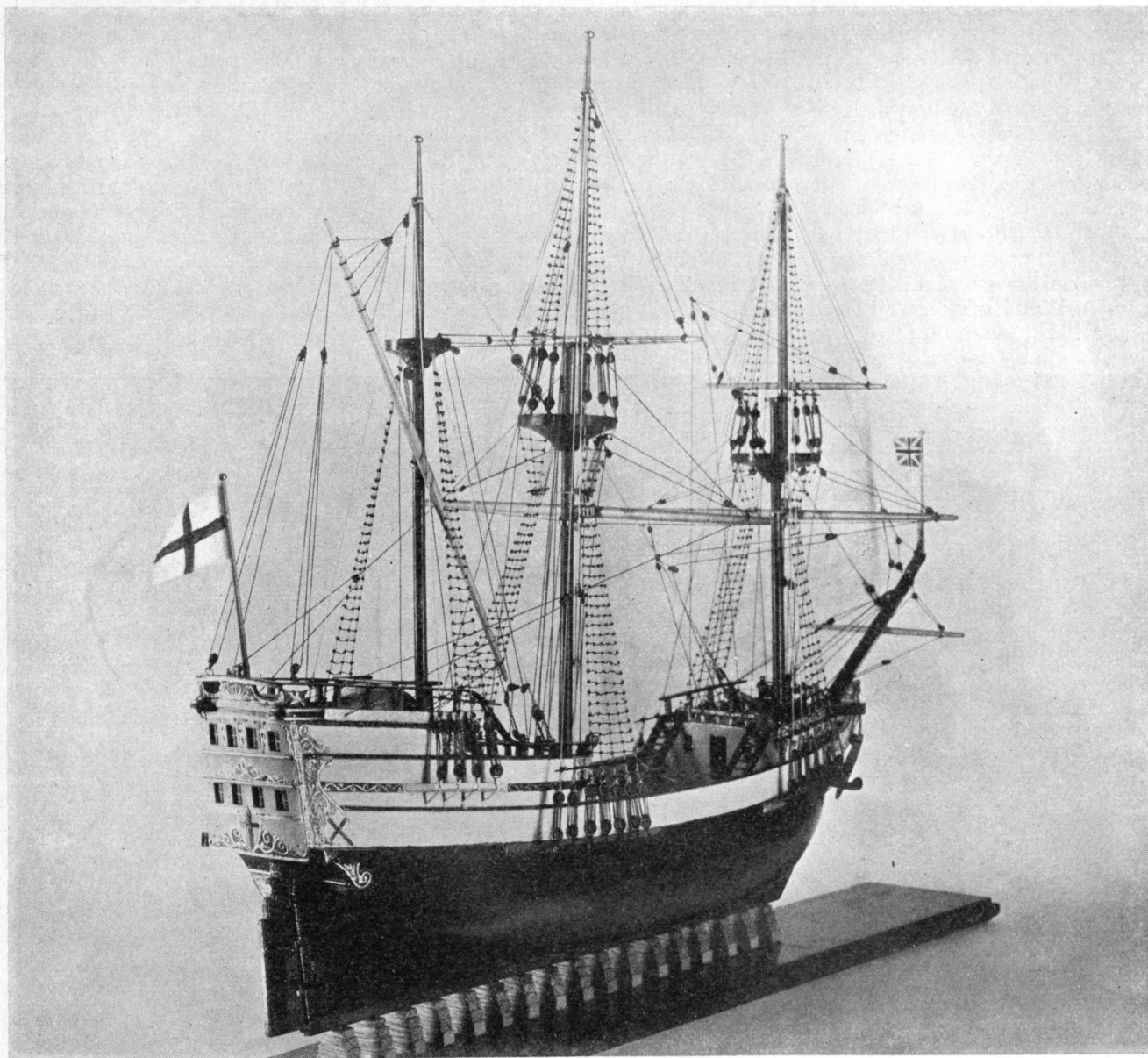
Proposed Change in name from "Course in Ship Operation" to "Course in Shipping Administration": Professor Chapman suggested that the present name of the Course over which he presides, *i.e.*, the "Course in Ship Operation," was not descriptive and, in fact, was misleading and that a

better name should be found, such as the "Course in Marine Transportation." Mr. Morss suggested the name "Course in Shipping Administration," which appeared to the Committee to be an improvement, and it was suggested that this change in designation be approved by the Executive Committee.

It was further suggested by Professors Jack and Chapman that, instead of designating this Course as "Option 2" in Course XIII, it might be called XIII-C. It will be recalled that Course XIII-A is a special course for Naval Constructors of the U. S. Navy. There is a course carried under the designation of XIII-B for Naval Constructors of foreign countries, but this has been discontinued. It was suggested that consideration be given as to the possibility of dropping Course XIII-B and giving this designation to the "Course in Shipping Administration."

Respectfully submitted,

JOSEPH W. POWELL, *Chairman*



A MODEL, DESIGNED AFTER SHIPS OF THE "MAYFLOWER" PERIOD, BUILT BY PROFESSOR JAMES R. JACK



Commencement

GRADUATION exercises, held this year on June 4 in Symphony Hall, Boston, marked the award of the largest number of graduate honors ever given at the Institute. President Stratton conferred 200 advance degrees including 174 Masters of Science, 9 Masters of Architecture, 6 Doctors of Science, 11 Doctors of Philosophy. In addition to these, 387 Bachelors degrees were conferred and twenty-nine Fellowships and scholarships announced.

The academic procession made colorful by academic insignia of institutions the world over, was led by Dr. Stratton and Chief Marshal Alexander Macomber, '07. Following Dr. Stratton marched Senator Hiram Bingham of Connecticut, the Commencement speaker, and his escort, Associate Professor James L. Tryon. Then came Reverend Samuel A. Eliot, with Colonel Frank L. Locke, '86; Major General Preston Brown, Commander of the First Corps Area with Colonel Harold E. Cloke; Admiral Philip Andrews, Commandant of the Boston Navy Yard, with Professor J. R. Jack; Commander Earl F. Enright, U. S. N., and Professor Charles F. Taylor; and Mayor E. W. Quinn, escorted by Professor J. W. Barker, '16.

Then came members of the Corporation of the Institute, who had as their marshal Walter Humphreys, '97, newly elected Secretary of the Corporation. Following the

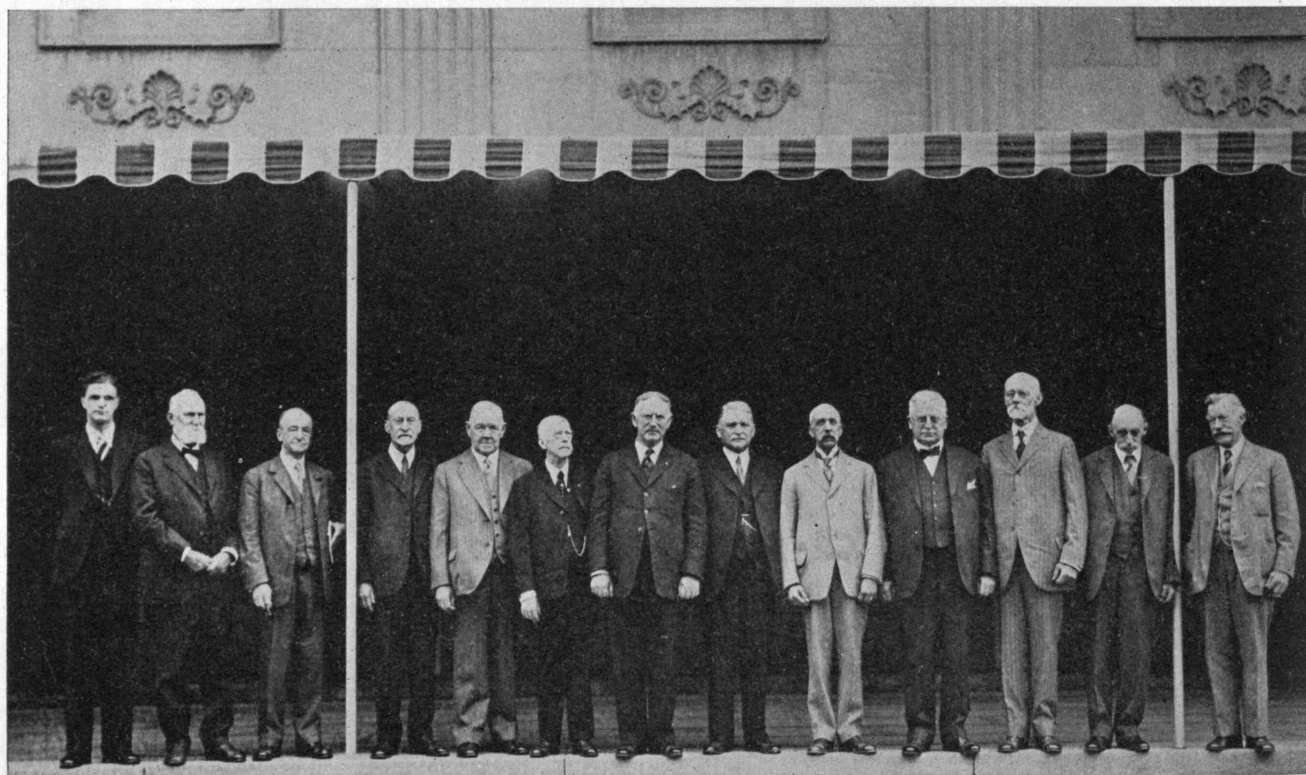
custom of other years the Fifty-Year Class, the men who were graduated in 1879, was given a place of honor in the procession, with Professor Samuel C. Prescott, '94, acting as marshal.

Professor George E. Russell, '00, of the Department of Civil and Sanitary Engineering, marched at the head of the Faculty procession. The candidates for degrees were led by C. Brigham Allen, President of the Class of 1929, of New Rochelle, N. Y.

New Corporation Secretary

FOR TWENTY years preceding his death James P. Munroe, '82, the third Editor of *The Review*, was Secretary of the Corporation, and now Walter Humphreys, '97, his predecessor as Editor of *The Review*, becomes his successor as Secretary and Life Member.

Since Mr. Munroe's death on February 2, Joseph W. Powell has been Acting Secretary, but at the meeting on May 31, Mr. Humphreys actively assumed the important position to which Mr. Munroe so long lent distinction. At present Secretary-Treasurer of the American Association of Wool Manufacturers, shortly after his graduation in the Department of Mechanical Engineering in 1897, he assumed the post of Registrar at the Institute, and held it for twenty years. He was Editor of *The Review* for one issue, Number 4 of Volume I, published in 1899. From



Frank Colby

AFTER ITS PARTICIPATION IN THE COMMENCEMENT EXERCISES, THE CLASS OF 1879 WAS THE GUEST OF PRESIDENT STRATTON AT A LUNCHEON. THEY WERE ACCOMPANIED BY C. BRIGHAM ALLEN, PRESIDENT OF THE GRADUATING CLASS



Fairchild Aerial Surveys, Inc.

MOST RECENT VIEW OF THE INSTITUTE PROPERTIES, TAKEN FROM THE WESTERN SIDE

1906-1923 he was Secretary-Treasurer of the Alumni Association; from 1920-1922 Associate Professor of Mechanical Engineering. In addition he served as a Term Member of the Corporation from 1923 to 1928. The Review, together with all of Technology, applauds this appointment of Mr. Humphreys. Few men have devoted themselves as conscientiously to the welfare of the Institute, few are more familiar with its many facets.

In addition to the election of Mr. Humphreys, the Corporation on May 31 also confirmed the election of three

nominees to Term Membership on the Corporation:

Alexander Macomber, '07, Retiring President of the Alumni Association; Calvin W. Rice, '90, and Maurice R. Scharff, '09, Retiring President of the Technology Clubs Associated. The retiring Term Members are: George L. Gilmore, '90, Lexington, Mass.; Morris Knowles, '91, Pittsburgh, Penna.; and Redfield Proctor, '02, Proctor, Vt. Their terms are for five years.



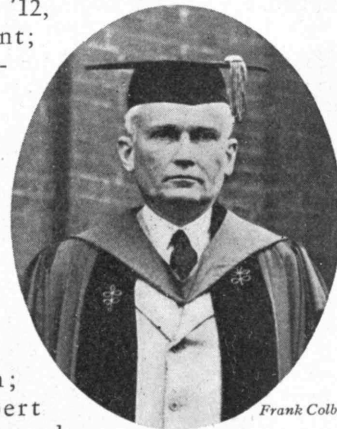
Notman

WALTER HUMPHREYS, '97,
THE NEW SECRETARY AND
LIFE MEMBER OF THE
CORPORATION

Faculty Appointments and Resignations

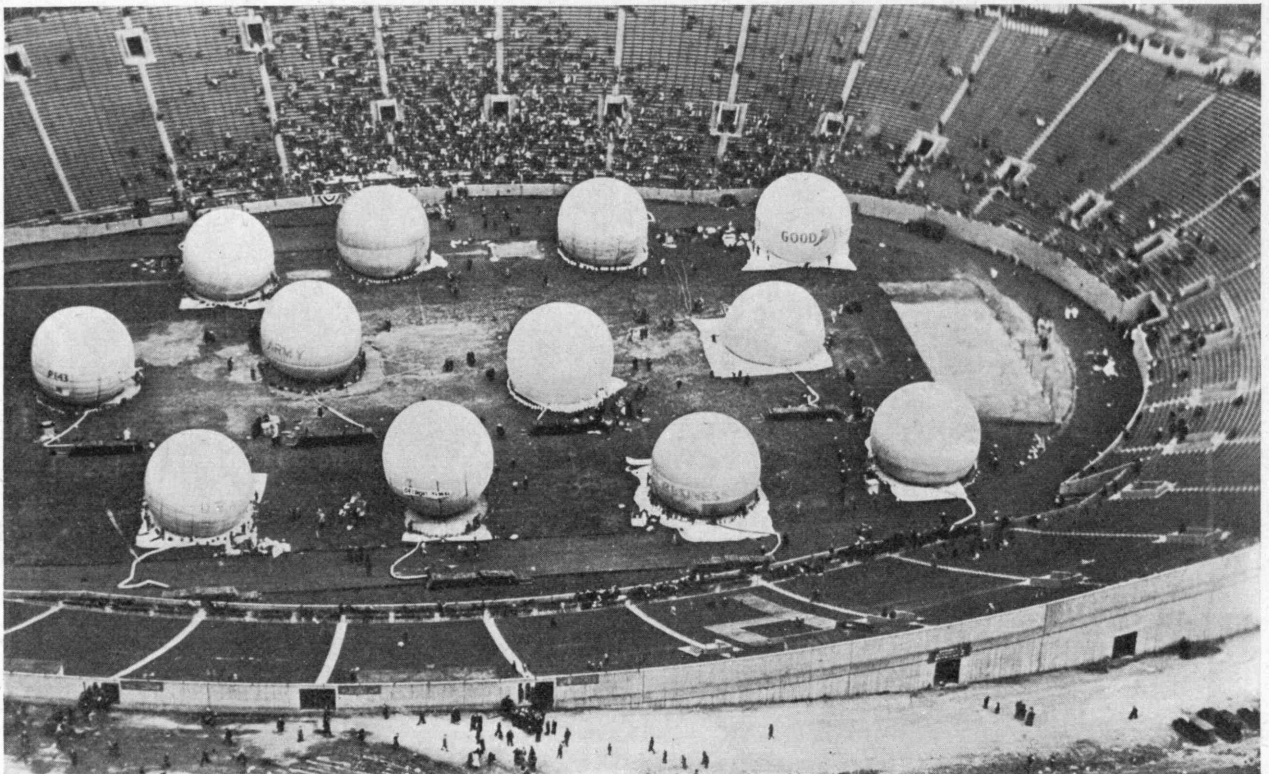
THE LIST of promotions among the Faculty confirmed by the Corporation on May 31 includes the names of nine Associate Professors who have been promoted to the grade of Professor: Lawrence B. Chapman, '10, Ship Operation and Marine Engineering; Ralph G. Hudson, '07, Electrical Engineering; Frank L. Hitchcock, Mathematics; Waldo V. Lyon, '05, Electrical Machinery; Earl B. Millard, Theoretical Chemistry; Erwin H. Schell, '12, Business Management; Henry L. Seaver, English; George W. Swett, '03, Machine Design; and Charles F. Taylor, Aeronautical Engineering.

The following were advanced to the grade of Associate Professor: James A. Beattie, '17 Physico-Chemical Research; Lieutenant-Colonel Robert C. Eddy, Military Science and Tactics; Karl D. Fernstrom, '10, Business Management; Victor O. Homerberg, '21,



Frank Colby

SENATOR (CONN.) HIRAM
BINGHAM, SPEAKER AT
GRADUATION ON AVIA-
TION'S FUTURE



Wide World

BALLOONS IN PITT STADIUM, BEFORE THE START OF THE NATIONAL ELIMINATION RACES, HELD ON MAY 4, DURING THE MEETING OF THE TECHNOLOGY CLUBS ASSOCIATED IN PITTSBURGH

Physical Metallurgy; Henry O. Forrest, '20, Chemical Engineering and Director of the Research Laboratory of Applied Chemistry; Per K. Frolich, '23, Chemical Engineering and Assistant Director of the Research Laboratory of Applied Chemistry; Murray P. Horwood, '16, Biology and Public Health; Frederick K. Morris, Geology; Winward Prescott, English; and Norbert Wiener, Mathematics. Promotions from Instructor to the grade of Assistant Professor follow: Murray F. Gardner, '24, Electrical Engineering; Louis Harris, '20, Chemistry; Ernest H. Huntress, '20, Chemistry; Frederick H. Norton, '18, Ceramics; Kenneth C. Reynolds, Hydraulics; Lepine H. Rice, Mathematics; Daniel C. Sayre, '28, Aeronautical Engineering; Francis W. Sears, '20, Physics; George V. Slottman, Chemical Engineering; Leighton B. Smith, '19,

Physical Chemistry Research; Edward S. Taylor, '24, Aeronautical Engineering; Arthur L. Townsend, '13, Machine Design; Henry W. Underwood, Jr., Chemistry; John H. Zimmerman, '23, Materials of Engineering.

Two resignations from the Department of Aeronautical Engineering have been announced. Professor Edward P. Warner, '17, Head of the Department and former Assistant Secretary of the Navy for Aeronautics, resigns to enter business. He served on the staff of the Institute since his graduation in 1917. In 1926 he was given leave of absence to act as Assistant Secretary of the Navy for Aeronautics. Professor Charles H. Chatfield, '14, who has been Acting Head of the Department during Professor Warner's absence in Washington also resigns now to join the Pratt and Whitney Company of Hartford, Conn., as

CHARLES P. ROCKWOOD, '01, AND C. LAUREN MALTBY, '22, OF THE TECHNOLOGY CLUB OF CHICAGO ARRIVING IN PITTSBURGH AND BEING GREETED BY MAURICE R. SCHARFF, '09, AFTER THEY HAD FOUGHT WIND AND RAIN TO REACH THE T. C. A. CONVENTION



an aeronautical engineer. He was graduated from the Institute in 1914 and received his Master's degree in 1915 and has been on the staff at Technology since 1926.

Professor Joseph W. Barker, '16, Associate Professor of Electrical Engineering since 1925 and one of the most prominent of the younger members of the Faculty, leaves the Institute to become Head of the Department of Electrical Engineering at Lehigh University.

From the Department of Economics and Statistics goes Willard E. Freeland, since 1922 Assistant Professor of Marketing. Associate Professor Edward Mueller has resigned from the Department of Chemistry where he has been teaching inorganic chemistry and thermochemistry since 1911. Dr. Mueller studied at Purdue, Harvard, and the University of Heidelberg before coming to the Institute. The two resignations from the Department of Civil and Sanitary Engineering are Charles Terzaghi, Professor of Foundation Engineering, and Richard G. Tyler, '10, Professor of Sanitary Engineering. Professor Terzaghi came from Robert College in Constantinople in 1926 and has been carrying on research in soil mechanics. He now goes to Vienna by way of Japan and the World Engineering Congress. Professor Tyler returned to the Institute in 1923 having been Dean of Engineering at the Oklahoma Agricultural and Mechanical College. He now leaves to become Dean of Engineering at the University of Washington in Seattle.

T. C. A. Convention

UNSTINTED were the tributes and praise accorded the God of Aviation at the Convention of the Technology Clubs Associated in Pittsburgh, on May 3 and 4. Many of his high priests and zealots had been drawn to Pittsburgh because of the National Elimination Balloon Races, and a majority of these accepted the invitation of President Maurice R. Scharff, '09, to join with the Clubs in a feast of reason and a flow of soul.

At the banquet on Friday night at the Schenley Hotel, a carefully prepared program was presented and broadcast over KDKA. Lester D. Gardner, '98, acted as toastmaster and presented for three-minute speeches Mr. Scharff; Dr. Stratton; Major General James E. Fechet, Chief of the Army Air Corps; William P. MacCracken, Jr., Assistant Secretary of Commerce for Aeronautics; Lieutenant Commander Charles E. Rosendahl, former commander of the dirigible *Los Angeles*; Paul W. Litchfield, '96, President of the Goodyear-Zeppelin Corporation; Commander J. H. Towers, the Bureau of Aeronautics.

In addition to this radio program, several scientific demonstrations were presented. Dr. S. M. Kintner of the Westinghouse Electric and Manufacturing Company,

exhibited a traffic signal device operated by the sound of a horn, an automatic switch for airports which turns on the field floodlights when it is affected by the noise of an approaching airplane, and the transmission of sound over a beam of light. By special arrangements with the Bell Telephone Company, Mr. Scharff held amplified telephone conversation with Francis J. Chesterman, '05, President of the Technology Club of Western Pennsylvania, and Frank B. Jewett, '03, Term Member of the Corporation, both of whom were at Hot Springs, West Va. Dancing followed the banquet.

At the business meeting Saturday morning, President Stratton spoke at length about the Institute, President Macomber about the Alumni Association, and William W. Vicinus, '23, representing the Technology Club of Rochester, showed with critical

comments a film used by that Club to interest high school students in the Institute. After the presentation of this film there was complete agreement among all present that the Institute should have a worthy film, and President Stratton assured the meeting that steps would be taken to prepare one.

The report of the Executive Committee, nominating the following officers for the ensuing year, was heard and accepted: for President, George K. Burgess, '98; for Vice-Presidents, Jerome C. Hunsaker, S.M. '12, George W. Ousler, '16, C. Lauren Maltby, '22, and Charles W. Loomis, '16.

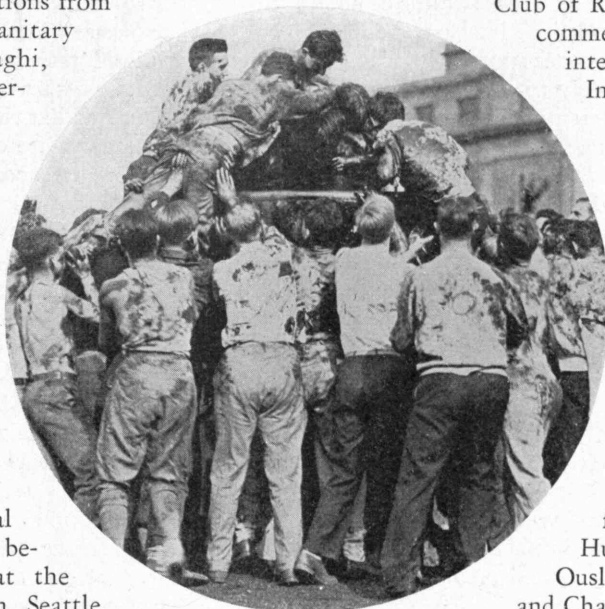
The item on the program for Saturday afternoon was the trip to the Pitt Stadium to witness the start of the balloon races. Again the weather interfered, and the start scheduled for early afternoon did not materialize

until almost dark. It might be remarked that the actual adjournment of the convention came the next week in the wilds of New Hampshire upon the descent of the winning balloon, the *Detroit Times* entry.

Of the several groups that had planned to come by airplane, only one braved the inclement weather. Charles P. Rockwood, '01, and C. Lauren Maltby, '22, of the Technology Club of Chicago arrived in time for the banquet in a plane fittingly garnished as shown on Page 476. There were approximately 150 out-of-town Technology guests at the Convention.

Progress

POUGHKEEPSIE'S regatta, annually the cynosure of American rowing interest, this year has its initial Technology entries. Its races come on June 24 and their results will be known before this number of *The Review* is in circulation, but neither of the two Institute crews is expected to win, or even placed second. The varsity hopes to make a decent showing and reflect credit upon the



M. I. T. Photo
"TECHNIQUE" RUSH, THIS
YEAR HELD DURING THE
OPEN HOUSE CELEBRATION,
APRIL 27

progress of Technology rowing since its real start with little more than a river some eight years ago; the freshmen are sacrificing several weeks of vacation time and are entering purely as a sporting proposition. They are paying all their own expenses. In spite of a consistently poor season in which they lost every race, they have shown a steady improvement culminating in a close race with the Columbia freshmen, regarded as the best of the young crews in the East.

Nor has the showing of the varsity been impressive in the matter of victories. Aside from the early upset at Annapolis (the first defeat of a Navy varsity crew by Technology) and a second place, Harvard being third, in a triangular competition which Cornell won, the varsity lost to Princeton by a small margin and was beaten badly by Columbia. These, however, were all short races of not over a mile and three-quarters. On the Hudson the distances are to be four miles. Like other sports, the idea of rowing at Technology is not solely to produce winning crews but rather to interest increasing numbers of undergraduates in the value of pursuing some wholesome form of athletic exercise. Whatever the outcome at Poughkeepsie (and we hope it will be far beyond expectations) the lasting merit of the 1929 rowing season, for which Coach Haines is primarily responsible, will rest upon the increased number of men following the sport. This year nearly 150 "worked out" at the boat-house and the equipment was operated to capacity.

Including those interested in rowing it may be conservatively said that one out of every three (or better) undergraduates has, during 1928-1929, participated in active competition for some varsity or intramural team. There are sixteen of the former and nearly one hundred of the latter. Provisional recognition was given to a pony polo team a year ago and lately similar courtesies have been extended by the Advisory Council on Athletics to lacrosse and squash racquets.

Next to rowing, track and cross country continue to interest the greatest numbers, but the more specialized sports are not denied places on the program. Soccer, together with fencing, provides a form of exercise appealing especially to foreign students and it is included. Outstanding among the "specialized sports" during 1928-1929 have been the basketball team which has shown a very high percentage of victories in an active season, the gym team with the best record ever made by an Institute team in this sport, and the swimming team with five individuals and two relay teams breaking existing Institute records.

Encouragement to all athletic activity has been given by the construction work now underway on the Institute land west of Massachusetts Avenue. There are to be a new baseball diamond, and new soccer and lacrosse fields.

Council Meetings

FARM RELIEF is hardly more vexing to the National Congress than the drafting of a new method for the nomination of Corporation Term Members is to the Alumni Council. The comparison is not too far-fetched: both the bodies have before them prickly problems, both have debated heavily and both find satisfactory solutions elusive.

Dr. Allan W. Rowe, '01, in cadenced speech replete with antithesis, paronomasia, and translicing, first enunciated before the Council the difficulties inherent in the present method for nominating Term Members by the apathetic balloting of a few Alumni. It was apparent that something must be done, and forthwith a committee was appointed to frame a new plan that would make for better selection and remove the rankling sting of public political defeat that each year must be suffered by six men under the present plan, and that each year deters other men from running. The Committee duly framed a new plan, a representative electoral college, to suggest many names and finally to vote for three out of nine names presented by the Nominating Committee.

The Council demurred; representatives of local associations voiced resentment that their far-flung groups should be denied a voice and that politically disinterested Alumni should be disenfranchised. The plan was recommitted to the committee for revision, the committee ingeniously revised, and in April at the 139th Meeting of the Council presented a compromise of such consummate legislative legerdemain that it succeeded in bringing Hamiltonian Federalism in beautiful consonance with Jeffersonian Democracy.

The Council seemed pleased, in fact, seemed won, although it could not express itself by vote until five months later. The plan certainly was tacitly accepted; not even at the Convention of the Technology Clubs Associated in Pittsburgh, on May 3 and 4, did anticipated objection follow President Macomber's presentation of the compromise. At any rate, the April meeting resigned itself to the Committee's proposals and passed on to Professor Samuel C. Prescott's [94] description of his Department's new course in Public Health Engineering, and thence to Assistant (now Associate) Professor Frederick K. Morris's scholarly tales of myth and superstition in Central Asia. The latter was the evening's night-cap and after it the thirty-eight legislators went home to bed.

Twenty-eight days later, on May 27, the same number appeared again in Walker Memorial for the 140th and Annual Meeting of the Council, this time not to argue over Term Membership Selection (it was not even mentioned on the floor) but to listen to fourteen reports from Council officers and committees and to elect by ballot three new members to the all-important Nominating Committee.

The following were chosen for the three vacancies on the Nominating Committee for terms of three years: Harry J. Carlson, '92; Harold B. Richmond, '14; and Frederick Bernard, '17. Gleanings from the fourteen reports include the following facts: the number of dues collected by The Review for this year total approximately 7,325, more than 500 above last year's record; Tech Show this year realized a profit of \$1,100.00 contrasted to last year's loss of \$1,600.00; the Alumni Dormitory Fund now totals \$496,455.40; the total annual expenditure \$50,000.00 for Technology athletics is \$25,000.00 less than the Harvard University spends for crew alone; for the first time in seven years the expenditures of the Association have not exceeded its income from dues.

The Nominating Committee announced the following appointments: to replace Francis R. Hart, '89, on the Committee on Permanent Funds, Edward L. Moreland,

'07; to replace Edward L. Moreland, '07, on the Committee on Assemblies, Raymond S. Stevens, '17; to fill the vacancy created by the death of James P. Munroe, '82, Professor Robert P. Bigelow. The Special Committee to Nominate Members for the Advisory Councils submitted the following nominations: on the Advisory Council on Athletics, Henry E. Worcester, '97, and Avery H. Stanton, '25; on the Advisory Council on Tech Show, Eric F. Hodgins, '22; on the Advisory Council on the Boat House, Horace S. Ford, Bursar; on the Advisory Council on Walker Memorial, Henry B. Shepard, '16; on the Advisory Council on the Musical Clubs, D. G. Robbins, '07.

The meeting closed at nine o'clock, the shortest annual meeting on record, leaving until next fall, as perforce it must, the still prickly problem of a revised plan for selecting Corporation Term Members.

Technology Dinner Plates

A PLAN for taking Technology into the home was recently launched when the Alumni Association underwrote the design and production of a limited number of sets of pictorial dinner plates. These plates, twelve to the set, each plate having a different view of the Institute in the center, are to be of the famous Wedgwood pottery, made at Etruria, Stoke-on-Trent, England, by the descendants of the great Josiah Wedgwood.

Initial plans contemplated the production of only a few sets for distribution to persons interested in rare china, but it subsequently became apparent that a set of plates, properly executed and reasonably priced, would have a very wide appeal among Institute Alumni at large. Informed of this, the local importer of the Josiah Wedgwood and Sons, Ltd., submitted a plan that has made it possible to respond to this appeal by placing on sale a larger number of sets at a resultingly lower price.

In accordance with the submitted plan, it will be possible, if 500 orders are received, to produce and sell the sets containing twelve plates each at a price of \$13 per set, or \$25 for two sets, including packing and postage. The first 225 orders received from members of the Alumni Association in good standing will be filled at no extra cost, by sets bearing the autograph of President Stratton. This autographed edition will be strictly limited and at the completion of the stated edition the autographed engraving will be destroyed. A deposit of \$4.00 per set is required with all orders, and the remaining \$9.00 per set will be due when the plates are ready for delivery next spring.

The plates are standard dinner-plate size, 10¼ inches in diameter, weighing 20 ounces. Designed by Wedgwood and limited in America to Technology plates, the border is characterized by an exquisite formalism in character with the Institute views to be reproduced in the center. Both the border design and the center pictures are reproduced in Staffordshire blue on a white background. The plates may be correctly used either as dinner or place plates, and in addition may serve effectively in a purely decorative capacity.

Every plate will bear on its reverse the name of the Institute, the year 1930, the name of the building represented on the obverse side, and the Wedgwood mark.

As The Review goes to press the limited edition has practically been taken.

Alumni Secretary

THE REVIEW is happy to announce in behalf of the Executive Committee of the Association the appointment of John O. Holden, '24, as Alumni Secretary, his term of office to begin July 1. Since the resignation of Orville B. Denison, '11, one year ago, the work of the Association has been temporarily conducted by members of The Review staff. The appointment of Mr. Holden brings to an end this "interregnum" and the Association once again proceeds fully manned.

It was the purpose of the Executive Committee in selecting a new Secretary to obtain a man familiar with the affairs of the Institute whose business affiliations permitted him to carry the Association's work on a part-

time basis. Mr. Holden fills this prescription admirably. The year following his graduation he was an assistant in the Department of Economics and throughout he has done valuable work as a member of the Alumni Council, of the Committee on Assemblies, and as Course XV Secretary for his Class. At the present time he is in the Boston sales office of the Detroit Steel Products Company. The Review solicits for the new Secretary the cooperation and support of all Technology men. With that backing he will go far toward making the Association an increasingly efficient adjunct of the Institute.

As reported at the Alumni Council meeting in May, the Secretaryship and Treasurership of the Association will henceforth be divorced. The latter will be in the hands of J. R. Killian, Jr., '26, Managing Editor of The Review and this past year Acting Secretary-Treasurer. During the year just closing the collection of dues has been a function of the Circulation Department of The Review and this arrangement is to continue in the future.



Notman

JOHN O. HOLDEN, '24, NEWLY APPOINTED ALUMNI SECRETARY. HE ASSUMES OFFICE JULY 1



Bays and Laurels: Hydraulics

JOHAN R. FREEMAN, '76, Life Member of the Corporation, Past President of two national engineering societies, sometime consulting engineer to the Isthmian Canal Commission and to the governments of Canada and China, and at the present time vigorous opponent of the Jadwin Mississippi flood control plan, adds to previous distinctions that of *honorary fellowship* from the Polytechnic Institute of Karlsruhe. His new honor is bestowed in "recognition of his pioneer activities as a many-sided engineer in prominent scientific research and his services for the international promotion of hydraulic systems."

Bays and Laurels: Art and Architecture

Five Alumni of the Department of Architecture take front rank in recent competitions. They are:

❑ SIDNEY B. WAUGH, '27, winner of the coveted *Prix de Rome* in sculpture for his "Steel", pictured in an adjoining column. For three years under the tutorial direction of M. Henri Bouchard, Parisian sculptor, his career had already been marked by a first mention in the Paris Salon and by his war memorial for Kemmel, Belgium. The value of a *Prix de Rome* approximates \$8,000.

❑ CHARLES ST. GEORGE POPE, '27, of the office of RAYMOND HOOD, '03, winner of the Forty-fourth Rotch Traveling Scholarship in Architecture, yielding him \$2,000 for two years of foreign study.

❑ DONALD S. NELSON, '26, and WILL R. AMON, '23, two of four Americans remaining in the competition for the Columbus Memorial Lighthouse to be erected on the site in Santo Domingo where Columbus is supposed to have landed. Mr. Nelson two years ago won the Paris Prize and since has been associated on the plans for the Exposition in Chicago; Mr. Amon won the 1925 prize given by the school of Beaux Arts at Fontainebleau and last year the Le Brun Traveling Fellowship.

Bequests

❑ KATIE M. A. GRIMMONS, mother of JOHN A. GRIMMONS, '21, accidentally electrocuted at the Malden and Melrose Electric Company in 1924, has willed to the

Institute a trust fund equivalent to one-half the residue of her estate. Its income is to be paid during his lifetime to her remaining son and upon his death is to be available for scholarships, preferably for students in electrical engineering. The principal of the fund is estimated to be \$150,000.

❑ CHARLES W. GOODALE, '75, whose death occurred on April 11, bequeathed the sum of \$50,000 to the Institute with the expressed desire that it be used for dormitories. Members of the Alumni Council, first hearing of this, also heard that he had contributed the donations of the Class of 1868 to the Dormitory Fund.



SIDNEY B. WAUGH, '27, AND HIS SCULPTURE "STEEL", WHICH WON FOR HIM A "PRIX DE ROME"

Elections

Important posts vacated through death, resignation, retirement, or otherwise are to be filled through election as follows:

❑ WALTER HUMPHREYS, '97, becomes a Life Member of the Corporation and succeeds, as its Secretary, the late JAMES PHINNEY MUNROE, '82. (See page 476.)

❑ SAMUEL C. PRESCOTT, '94, Professor of Industrial Biology and Public Health, is chosen by the Faculty to be its Chairman for 1929-1930. He replaces CHARLES L. NORTON, '93, Professor of Industrial Physics and Head of the Department of Physics, incumbent of the chairmanship during the past two years, the customary term.

❑ ALEXANDER MACOMBER, '07, MAURICE R. SCHARFF, '09, and CALVIN RICE, '90, nominated by the Alumni as Term Members of the Corporation, have been formally elected to office. They replace GEORGE L. GILMORE, '90, MORRIS KNOWLES, '91, and REDFIELD PROCTOR, '02, who have completed the five-year terms.

❑ WILLIAM E. WICKENDEN, director of the study of technical education conducted by the Society for the Promotion of Engineering Education and, from 1909 to 1918 a member of the Technology Faculty, is named President of the Case School of Applied Science.

❑ WILLIAM HOVGGAARD, Professor of Naval Design and Construction, has been made a member of the National Academy of Sciences.

❑ JAMES A. BEATTIE, '17, Associate Professor of Physico-Chemical Research, has been made a fellow of the American Academy of Arts and Sciences.

❑ HAROLD B. RICHMOND, '14, Treasurer of the General Radio Company, has been elected President of the Radio Manufacturers' Association.



THE COMMITTEE OF AMERICANS WHICH REORGANIZED THE FINANCES OF THE DOMINICAN REPUBLIC. THEODORE W. ROBINSON, '84, STANDS TO THE LEFT AND REAR OF AMBASSADOR DAWES

Reelections

CL ALLYNE L. MERRILL, '85, Professor of Mechanism, to whom was dedicated *Technique 1929*, by unanimous vote continues as Secretary of the Faculty. It will be his twenty-fourth term.

CL Among those continuing in office in the American Academy of Arts and Sciences are: EDWIN B. WILSON, Professor of Vital Statistics in the Harvard School of Public Health and quondam Head of the Department of Physics at Technology, as President; HARRY M. GOODWIN, '90, Dean of Graduate Students and Professor of Physical and Electro-Chemistry, as librarian; ROBERT P. BIGELOW, Professor of Biology and Parasitology, as corresponding secretary; WILLIAM S. FRANKLIN, who retires this year from the Institute's Faculty as Professor of Physics, as editor; INGERSOLL BOWDITCH, '00, as treasurer.

Retirements

Two members of the Faculty, both born in October, 1863, become inactive as of the close of the academic year 1928-29:

CL DANA P. BARTLETT, '86, Professor of Mathematics, after forty-three years of service.

CL WILLIAM S. FRANKLIN, for twelve years Professor of Physics and previously a member of the faculty of Lehigh University.

CL Likewise IDA DAYTON LORING relinquishes her post of Librarian of the Department of Architecture. Her twenty-seven years of service began in 1902.

Other current retirements include:

CL ARTHUR D. LITTLE, '85, as President of the British Society of Chemical Industry, at its annual general meeting in Manchester, England, this month.

CL Rear Admiral CHARLES MORRIS, '96, Paymaster General of the United States Navy since 1925; at his own request from the Navy. Grandson of Charles

Morris, executive officer of the U.S.S. *Constitution* in her victorious engagement with H.M.S. *Guerrière*, Admiral Morris entered the Pay Corps of the Navy at the opening of the Spanish-American War. He was aboard the U.S.S. *New York* during the engagement off Santiago on July 3 and 4, 1898, and on the July 18 following was aboard the U.S.S. *Hist* at the bombardment of Manzanillo. In 1904 he survived the disastrous explosion on the U.S.S. *Bennington* in the Pacific. During the World War he was Paymaster of the fleet.

Appointments

In the Faculty there are to be nine new Professors, ten new Associate Professors, and fourteen new Assistant Professors. (See page 475.)

Other current appointments are:

CL EDWARD P. WARNER, '17, former Professor of Aeronautical Engineering, Assistant Secretary of the Navy for Aeronautics under the Coolidge Administration; to membership in the National Advisory Committee for Aeronautics for which, in 1919-1920, he was chief physicist.

CL EDGAR L. KAULA, '16, author of *Tech Show 1914*, "A Royal Johnnie"; as Managing Director for The Texas Company in New Zealand.

CL CARROLL H. SHAW, '10, as general superintendent of the transmission and distribution department of the New York Edison Company.

CL JAMES E. WALLIS JR., '17, and FRED C. SOMMER, '25, as American Trade Commissioners at Berlin and Riga, respectively. The former, a Captain of Coast Artillery in the World War, received the Distinguished Service Cross and an Army Citation for Valor. Subsequently he represented the Sullivan Machinery Company in Asia. The latter's territory will cover the Baltic Republics of Estonia,

Latvia and Lithuania, and be a listening post on Russia.

CL GORDON M. FAIR, '16, as Associate Professor of Sanitary Engineering in the Harvard Engineering School.

CL LOUIS S. CATES, '02, as President of the National Copper Bank of Salt Lake City.



WILLIAM H. BASSETT, WHO DIED ON MAY 16, 1929. HE WAS HEAD OF THE DIVISION OF MUNICIPAL AND INDUSTRIAL RESEARCH

Predictions

Peering into their private horoscopes the following men foresee the following developments:

CL PAUL W. LITCHFIELD, '96, President of the Goodyear-Zeppelin Corporation, and the Alumni Association: a commercial airship service to Hawaii.

CL THOMAS A. JAGGAR, from 1902 to 1917 Head of the Department of Geology: an eruption of Mauna Loa "sometime within eighteen months."

❑ JOHNSON O'CONNOR, industrial and vocational psychologist with the General Electric Company and lecturer on that subject at the Institute; a number language. "A group of bankers and scientists cooperating with one another might so formulate numbers into a simple language that they could be handled with two-thirds the present effort."

In Partibus Infidelium

❑ Engineering in Russia has drawn two men: JOSEPH P. FISH, '12, electrical engineer for the Hugh L. Cooper and Company, is at work upon the *Dnisterprostoi*, an 800,000 horse power hydroelectric development under construction by the United Socialist Soviet Republics. FRANK CHASE, '01, is busying himself with the design of Soviet founderies.

Record Holders

❑ JOSEPH L. LEVIS, '26, first American to place in the Foils finals of the Olympic Games, holder of the National Three Weapon Championship, has now reached an apogee of swordsmanship by winning the Foils Championship of America.

❑ Lt. EDWARD W. ROUNDS, '17, U.S.N., one-time (1916-1917) Captain of the Technology Varsity Wrestling Team, on May 25 won second place in the Annual Navy and Marine Corps Seaplane races.

Donor

❑ GEORGE EASTMAN, Life Member of the Corporation, has given to the poor of London a million dollar dental clinic and to the Association of American Rhodes Scholars \$200,000 to establish a George Eastman visiting professorship at Oxford.

Deaths

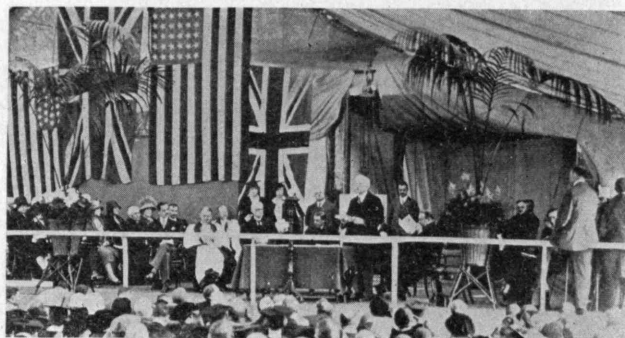
Since the last issue, reports have come to The Review of the decease of the following:

❑ HENRY M. LANE, '73, on May 15, 1929. His death in the explosion at the Crile Clinic in Cleveland ended an engineering career made notable by the designing and building of the first cog railroad on Pike's Peak.

❑ HARRY M. BOON, '83, on December 8, 1928. He was affiliated with the Babcock and Wilcox office in Chicago.

❑ SAMUEL P. POLAND, '84, on January 20, 1928, at San José, Calif.

❑ ELEAZER B. HOMER, '85, on February 12, 1929. A former instructor in



GEORGE EASTMAN, LIFE MEMBER OF THE CORPORATION, AT THE DEDICATION OF THE DENTAL CLINIC HE DONATED THE LONDON POOR

Architectural History at the Institute and a member of the architectural firm of Clark, Howe, and Homer. He later maintained an office of his own.

❑ HENRY W. BLAKE, '88, on May 20, 1929. Lecturer from 1890-91 at the Institute on the Construction and Application of Electromotors and since 1908 editor of the *Electric Railway Journal*.

❑ HARRISON G. DYAR, '89, on January 21, 1929. A research student in the field of Lepidoptera investigation.

❑ GEORGE H. WETHERBEE, JR., '89, on February 4, 1929. A partner of the civil engineering firm of White and Wetherbee of Braintree and Boston.

❑ WILLIAM I. PALMER, '91, on April 14, 1929, in Winchester, Mass. Treasurer of Palmer and Parker, mahogany importers and manufacturers.

❑ RALEIGH B. ADAMS, '94, on April 14, 1929, after an accident and an operation. A manufacturer of belting and other products made from rubber.

❑ HENRY F. RIPLEY, '94, on May 30, 1929, at Hingham, Mass. A representative of his district in the state Senate.

❑ FRANK B. SHERMAN, '95, in April, 1929, in Terre Haute, Ind. Engaged in the bond business.

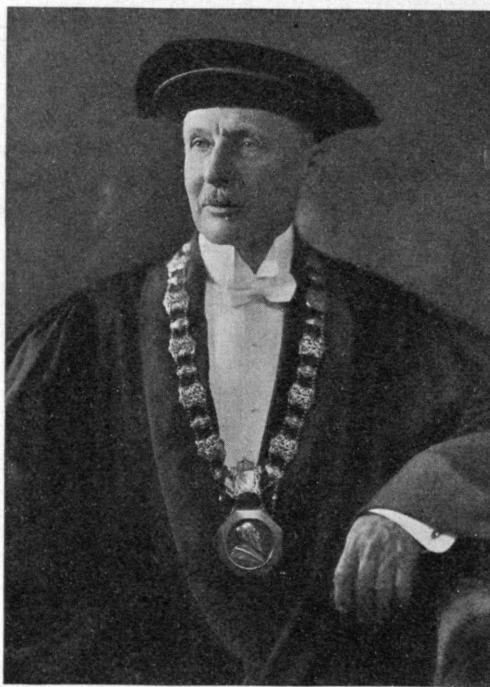
❑ LANE JOHNSON, '99, on March 2, 1929, at Ingram, Penna. A mechanical engineer for various steel plants.

❑ WINFRED F. ROBERTSON, '03, on February 18, 1929, in Los Angeles, Calif. A paper manufacturer of Hinsdale, N. H.

❑ CLARENCE A. BOWEN, '07, on December 15, 1928. He was plant engineer for the American Hide and Leather Company in Lowell, Mass.

❑ GEORGE S. S. PLAYFAIR, '07, on March 28, 1929, at Gravesend, Kent, England. Disabled during the World War, he subsequently became an employee of the English Government in the Division of Taxation.

❑ BENTON J. BROWN, '22, on March 9, 1929, in Chihuahua, Mexico. Assistant superintendent of the American Smelting and Refining Company.



THEODOR REHBOCK, PROFESSOR OF HYDRAULICS AT THE TECHNICAL UNIVERSITY OF KARLSRUHE, AND LECTURER AT THE INSTITUTE



Thousands of improvements in central office equipment in 5 years

*An Advertisement of the
American Telephone and Telegraph Company*



IN THE last five years there have been hundreds of improvements of major importance in telephone central office equipment in the Bell System, and lesser improvements by the thousands. Improvements have been made in switchboard cable, in relays, in cords, in condensers, in selectors, and in the development of new and better materials for all kinds of equipment used in the central offices.

These improvements have not only helped to meet the steadily increasing complexity of telephone requirements.

They also make possible the high-speed service which is eliminating delay from the personal contacts of people anywhere in the United States, whether they be separated by three floors of a building or three thousand miles of country.

There is no standing still in the Bell System. Better and better telephone service at the lowest cost is the goal. Present improvements constantly going into effect are but the foundation for the greater service of the future.



Meet M. I. T. Men Here

THE Technology Club has its headquarters in New York at the Allerton —38th Street and Madison Avenue. You can always count on meeting M. I. T. men and men from other colleges at the Allerton Houses in New York, Chicago and Cleveland.

College men like the atmosphere. They like the idea back of Allerton Houses... "Live in NINE Rooms... Pay for ONE". The comfort and sociability of an exclusive club without initiation fees or dues.

You pay for your bedroom...and at one or more Allerton Houses you have the use of comfortable Lounges, Reading Rooms, Solarium, Roof Garden, Squash and Tennis Courts, Gymnasium, Exercise Rooms, Showers, Billiard Room, Indoor Golf Course, Library and Restaurants.

Stop for a night...or live at an Allerton House for economy, comfort, sociability. Select the one that suits your convenience...all will suit your purse.

Rates: \$12 to \$20 a week
Transient Rates: \$2.50, \$3.00

ALLERTON

Chicago New York Cleveland

PRIMITIVE THINKING

(Continued from page 459)

seven deities who presided over the seven planets — and the seven gates of Babylon. They were acquainted with seven metals, each of which was under the influence of a planet and the patronage of a deity. The ancient scientists used the same symbols and the same names for all three.

Gold, the perfect metal, was sacred to the Sun, Sol, the Father God of the most ancient religions. The fire-worshipping Phoenicians, Druids, and Incas regarded it as sacred. The Sun has given its name to the first day of the week, Sunday, *Sonntag*, *dimanche* (*dies dominica*), the Lord's day.

Silver was sacred to the Moon, Luna, the Mother Goddess of the very old religions, Diana of the Romans. It corresponds to the second day of the week, Monday, moon day, *Montag*, *lundi* (*lunae dies*). Fused silver nitrate is still sold at the pharmacies under the name of "lunar caustic." The silver tree which is produced when a strip of copper is hung in a solution of silver nitrate was until recently pictured in the chemistry books over the legend, "*arbor Dianae*," or tree of Diana.

Iron was sacred to Mars, the god of war, who has given his name to the third day of the week, *mardi* (*martis dies*) in French, Tuesday (*Tiues daeg*) in English from *Tiw*, the Anglo-Saxon counterpart of Mars. The alchemists called hydrated ferrous sulfate "*martial vitriol*." When it was distilled at a strong fire, it yielded "*martial ochre*" or rouge.

The god, the planet, and the metal, Mercury, have given their name to the fourth day of the week, *mercredi* (*mercurii dies*) in French, Wednesday in English after Woden, chief of the gods and patron of wisdom, poetry, and eloquence in the Norse mythology.

Tin, the brightest of all the metals, was sacred to Jupiter or Jove, hurler of thunderbolts. A rod of tin makes a crackling noise when it is bent. Thursday, in French *jendi* (*jovis dies*) gets its name in the north-European languages from Thor, the Scandinavian god who had a short-handled hammer which the dwarfs had made for him. When he swung his hammer, the thunder rolled; when he threw it, the object of his aim was struck by lightning.

Copper was sacred to Venus, wife of Jupiter and goddess of love, who has given her name to the sixth day of the week, *vendredi* (*veneris dies*) in French, Friday in English and *Freitag* in German from Frigg, wife of Woden. The alchemists knew hydrated copper sulfate by the name of "*venereal vitriol*."

Lead, the dull metal, was under the influence of the dull planet, Saturn, and sacred to the god who has given his name to Saturday, the last day of the week. A saturnine person is one who is heavy, dull, gloomy, and possesses the nature of lead. The sweet taste of acetate of lead caused the alchemists to call it "*saccharum saturni*" or sugar of Saturn.

These few examples are particularly interesting to the student of the history of chemistry, and they are enough to show that occult science plays an important part in the everyday affairs of the Twentieth Century. Indeed, it is impossible to understand the history of science or the history of human development without taking large account of such matters. It is natural that this should be the case, for the beginnings of occult science are in

the spontaneous and unreasoned — so to speak, native — acts of the mind. The distinction of contraries and the bringing of them together again in a single unifying concept is our first *modus operandi* when we wish to think about things. The beginnings of occult science are themselves occult because they are hidden beneath the later experience of the race, but they are also the beginnings of authentic science. They lay down the method by which we attain our first understanding of phenomena.

WANDERINGS IN THE MIDDLE EAST

(Continued from page 462)

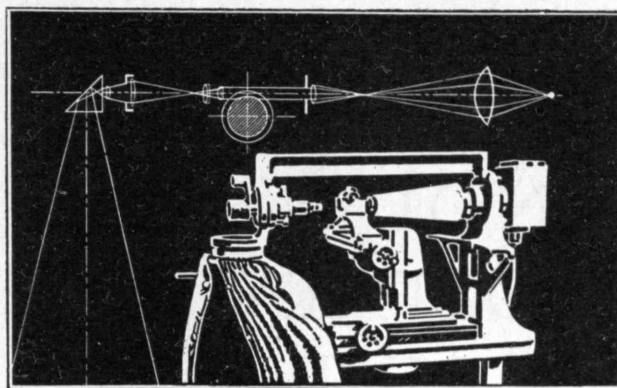
was overlooked. However, the city will long be remembered as having the poorest drinking water and the most unsanitary conditions of any city in Persia.

I passed on through various oil camps during the next several days under the guidance of the oil company's resident geologist, Martin Strong, and we were later joined by H. T. Mayo, the oil company's principal geologist in Persia. As we descended to the town of Fields shortly after dark, we saw bright lights and gas flares on the great oil field equaling those of any of our own western oil camps. We were welcomed to this town of well-oiled macadam roads and tasteful bungalows by the acting field manager, C. R. Clark. Here we visited the ancient ruins of the Masjid-i-Suleiman (probably a Zoroastrian fire-temple) and when I had studied the actual oil seepages in the vicinity and the quantities of natural gas under high pressure, it was not difficult to believe that the fire-temple may have been erected on a spot where natural gas once escaped, proving useful in Zoroastrian religious rites.

On the Karun River I had the opportunity of filming wild Bakhtiari tribesmen crossing the rapid torrent on inflated goat skins. It may have been near this spot that some of the scenes from "Grass" were photographed. This film was not pleasing to the Persians, but they should remember that the seemingly half-civilized scenes depicted of this belt of the country are not representative of all Persia. In this belt the tribesmen and their families are forced to migrate in order to keep pace with the seasonally changing climate and disappearing grass so necessary to their sheep and goats.

The return to Dar-i-Khasineh was made on the company's narrow gauge railroad. The rest of the trip to Ahwaz was made in my automobile. There I had a conference with one of the ministers of the government before I proceeded along the quadruple pipeline for Abandan, 135 miles from Fields. Here I inspected an oil refinery which was surprisingly prosperous and up-to-date, even to its fire department.

On account of seemingly endless formalities involved in transporting a Persian-owned automobile across Iraq, my men returned to Tehran, while I went into Iraq with only a secretary and a personal servant. Our luggage was carefully condensed into one box, and our passports and visas suited the red tape of the two nations. The railroad from this point passed through Mesopotamia where there was a shade temperature of 118° at (Concluded on page 486)



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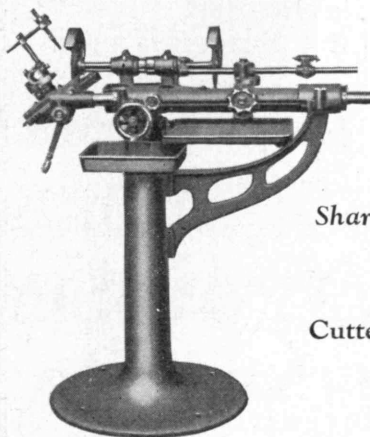
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WANDERINGS IN THE MIDDLE EAST

(Concluded from page 485)

this early season of the year. I passed the fabled site of the Garden of Eden, and the historic mount of Ur of the Chaldees, where Abraham was born, and pulled into Bagdad, where I inspected the ruins of Babylon. During this trip I was most hospitably entertained, and given every opportunity to inspect oil fields in the vicinity.

The oil fields of northeastern 'Iraq lie far from the ocean, but crude oil will probably be transported to the Mediterranean Sea by pipeline over 600 miles long. This line will be laid either entirely in British controlled territory or on French, according to the wishes of the stockholders. Either route is dangerously infested with bandits, as I proved when, returning westward, I was subjected to rifle fire. My entire collection of Persian rugs was stolen at that time by sixteen armed men and carried south into the Arabian desert.

I then returned to Khanakin to carry on my work at the Naft-Khaneh field. Although less than three years have elapsed since the first well was "brought in" and although oil has actually been produced through the pipeline to Khanakin for only two years, the field is an up-to-date one with modern equipment. My technical views on this field are included in reports made to the Persian Government. It will be interesting here merely to mention the similarity of some of the Naft-Khaneh problems with those of our own notorious Teapot Dome. Both fields lie astride an important boundary line, and they both, therefore, unfortunately share their technical interest with an admixture of politics. The paramount question for both is whether or not oil existing on one side of the boundary line can be tapped or its extractability affected by wells on the other side. This is the question, out of all those propounded to me, that it was easiest to answer on the basis of discoverable technologic conditions.

Since time was passing rapidly, I left in May for Tehran, after this circular journey from Tehran south to Bushire and north through Persia and 'Iraq back to Tehran, a journey of about 3,000 miles. Three months later my labors for the Imperial Government of Persia were finished and I returned by way of Beirut, Angora, and Constantinople to Paris where my family awaited me.

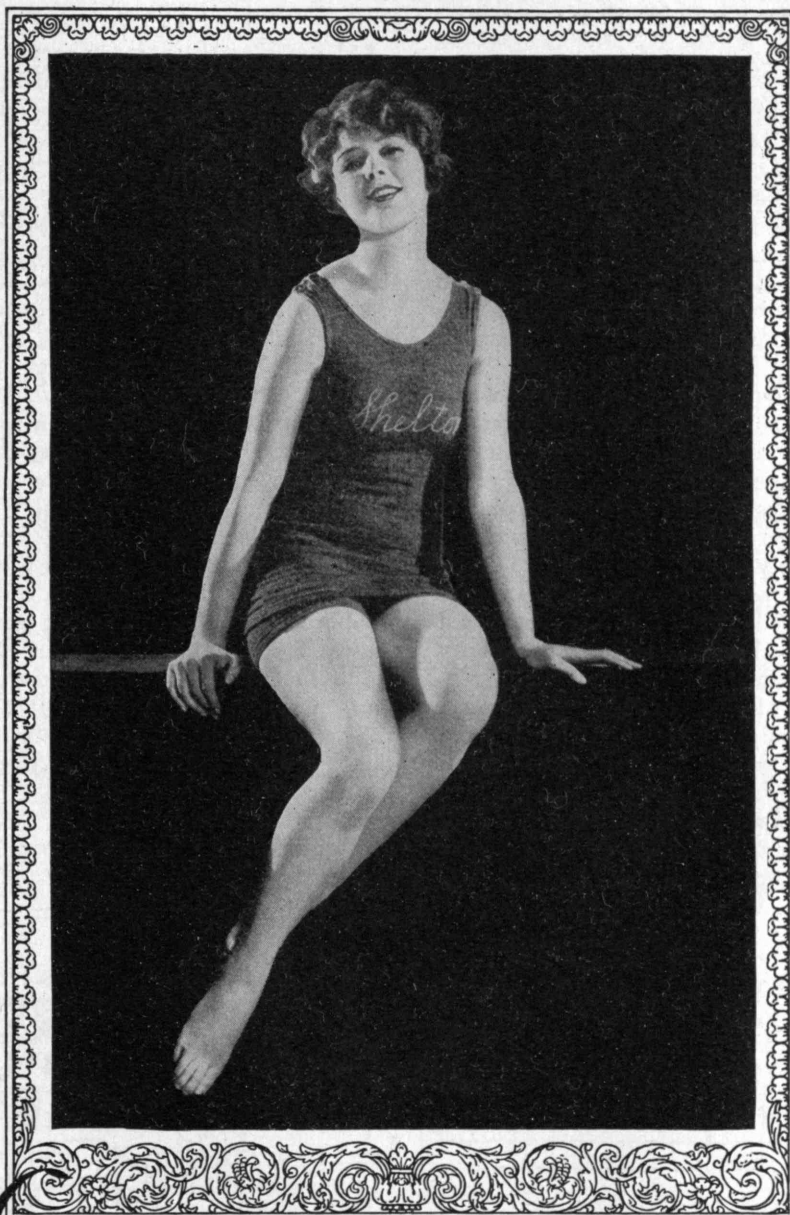
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THE WORLD'S FOOD

(Continued from page 465)

On the basis of 4.5 bushels per capita consumption, it is evident that we can continue to be an exporting nation for some years, but Canada, the Argentine, and Australia have relatively much larger surpluses as percentages of total crop to export. Canada produces one-half as much wheat as the United States and has but one-twelfth the population, Australia produces one-sixth and has but one-twentieth the population, while the Argentine produces one-fourth and has one-twentieth the population.

Perhaps, because of its importance to the white race, I have given too much attention to wheat. In regard to the meat supply, Europe may be fairly assumed to have been at the peak of production for many years. Countries with large areas not too densely populated, such as central North America, southern South America, and Australia, must supply the food necessary to maintain cattle, sheep, or hogs. In the United States the number of beef cattle raised has not materially increased in the last twenty years, although the number of dairy cattle has increased. Farming is encroaching on the great range areas. The number of sheep has already shown a decline, and swine, although now showing an upward trend, after a downward swing for a few years, may be approaching a maximum. Australia, New Zealand, and South America may be expected to be the chief sources of supply for the importing nations at no very distant future.

THE answer to the question of the world food problem depends on the point of view. We have the present reality of a world demanding more variety in foods but fairly well supplied as to immediate needs. It must not be forgotten, however, that the law of population increase is sometimes stated as a geometric progression while the increase in food supply is arithmetical. According to my friend, Dr. Edward M. East, it took perhaps 500,000 years for the population of the globe to reach 850 millions while in another hundred years it had doubled. By East's conservative estimate the yearly increase is about twelve millions, while Knibbs, who is also a careful statistician, places it at twenty millions. This means that every two years the additional food requirements of an England or a France must be provided, or in acres, allowing 2.3 acres per man, some forty million acres per year. Since the International Institute of Agriculture estimates that only about forty per cent of the total land area is arable, there is a total of 13,000 million acres available for food production.

The current rate of population increase is such as to double the population in sixty years, although in the United States it has doubled in about forty years and quadrupled in sixty years. But the percentage rate of increase is falling and, although it is impossible to be accurate, by the year 2000 the population will probably not greatly exceed 200 million. Even this number would utilize about all our present food production, and take us out of the surplus producing class.

With the rapidly increasing population it seems to me quite reasonable to suppose that (Continued on page 490)



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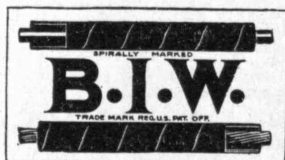


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THE WORLD'S FOOD

(Continued from page 488)

more attention will be given to the present methods of food preservation and to devising new methods. We shall utilize in the future the methods of refrigeration and drying to a much greater extent. While the drying industry was important in the Colonial Period, the method has never received the attention it deserves. Vast quantities of food now wasted can be preserved for future use. This would mean not only a saving of actual materials but also in the cost of transportation of such foods. Dehydration was attempted during the Boer War when quantities of dehydrated vegetables were prepared for the troops in South Africa, and again to a greater extent in the World War. In my opinion the failure of dehydration to be established as an important food industry has been due to the lack of science devoted to the process. It is not sufficient simply to remove the water from food products; it is also necessary to see that this is done in the proper manner to preserve color and prevent spontaneous enzymatic changes. All materials cannot be dehydrated with equal success, as was illustrated by the Department of Agriculture and Army studies of certain types of fruits and vegetables. Tomatoes serve as a good example. They retain their food value, and save materially over the cost of manufacture and shipping of canned tomatoes.

Dried or dehydrated milk of the future will be sold in a grocery in the same way that flour and sugar are now. The lessened cost of transportation by the removal of the eighty-seven per cent of water, the ease in handling this dry powder, and the possibility of perfect sanitation without reducing the food value, are factors greatly in its favor.

The new methods of refrigeration which I have already mentioned and the development of small units of electric refrigeration offer a means of conservation of vast quantities of food material. By means of refrigeration fish may replace beef, mutton, and pork as a source of protein food. The enormous supply of fish in the tropics and the Arctic may become a commercial source of food for wide distribution.

AT THIS point I suggest that in a consideration of the world's supply of food in the future, both the tropics and the Arctic regions may be relied upon to an extent which we little appreciate. This is foreshadowed on the one hand by the development which has taken place in the cultivation and distribution of the banana. This fruit, although now imported in vast numbers, may supplement to a very great degree the vegetable supply. In composition and food value it is almost of equal rank with the potato and may be utilized in a great variety of ways. The fact that the banana and the plantain have for hundreds of years made up a large share of the food supply of the native races in the tropics attests to its possibilities. The banana, however, is but one of the tropical products which may add very greatly to the available foods of the future. Even a considerable portion of our meat supply may have its origin in those countries which have not up to the present time been regarded as well adapted to the production (Concluded on page 492)

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THE WORLD'S FOOD

(Concluded from page 490)

of cattle and other meat-producing animals. The application of the principles of breeding and selection have already been demonstrated as capable of producing animals of this sort and such production combined with refrigeration seems entirely feasible as a commercial development.

To turn to the other extreme, the tundras of the Arctic may contribute their share to the meat supply of the future. This seems not unlikely in view of the success which has attended the introduction of the reindeer into Alaska where, in the course of a generation, a few hundred animals have increased to approximately a half million. The meat of these animals is already being shipped commercially to the United States. Although the supply from this source is obviously limited, it may, nevertheless, become of real economic significance in view of the vast areas to which these animals seem able to adapt themselves.

If it does not appear too visionary I should like to suggest one other possible source of food supply, which may seem fantastic and extreme. Food preparation at the present time is rapidly passing from the domestic to the factory scale. Food manufacturing industries are rapidly developing, and in my opinion, will continue to develop both in magnitude and scope. By-products, formerly thrown away, have been made into edible and nutritious products, one example of which is in the utilization of blood serum into edible proteins.

Through the advances in biochemistry and other sciences, new eras in intensive agriculture will come. It is not only possible but extremely probable that we shall have synthetic foods prepared from products which can be grown in abundance, such as alfalfa, soy beans, peanuts, and perhaps from other quickly growing plants. The use of x-rays, ultraviolet, and other chemically active rays of solar energy, and the developments which are certain to come in biological and chemical science will find their applications in food production long before the world is brought to the verge of starvation. It is to science that we have turned to meet exigencies as they have arisen, and there was never a period of greater promise in scientific advance. It is to science the world must turn in the search for food if through natural processes the limitations of human increase do not adjust themselves.

Surveying present conditions it seems that we may look forward to the future with assurance. What a century hence may show is a matter for thoughtful speculation, but it seems reasonable to hope it may be met with confidence and broad constructive vision and ability by our children's children. But it is not too soon for us to point out to the young scientists of today the possibilities to which they are likely to fall heir, or the problems which they may be called upon to solve. It is for the technical institutions to aid the young scientists. They are enabled to offer advice from experts who appreciate the difficulties involved and to lend the use of their equipment for the solution of these problems. Here is one of the many tasks for education which is worthy of the institutions in which we have so deep and abiding faith.

BOOKS

(Continued from page 470)

small and poorly equipped sailboat. Aided only by a broken sextant and a pocket compass he navigated a distance of more than two thousand miles, encountering the most dangerous storms. Steady rain falls, lack of fresh food, and Jorgensen's madness could not deter him from his object and his hardiness in the face of almost insuperable difficulties was his greatest attraction.

Captain Cameron kept to the sea and ships until he was an old man, and even then he took long trips when the desire seized him. Only once did he take a long trip by land across Russia, and lamented the lost sight of the blue ocean. His type is now extinct, the Age of Sail is gone, yet the tales he told will never be equalled for their hazardous adventure.

The immense amount of material supplied to Mr. Farrell in the copious notes of Captain Cameron must have been embarrassing. Compression had to be resorted to, and the latter half of the book shows this badly. The narrative style becomes lost in a desire to get in all the facts. Mr. Farrell has done well to get material enough for several volumes into the space of less than five hundred pages. The wealth of illustration and marginal drawings are happily chosen, and do much to give realism to the reader.

A companion volume to this, similar both in content and manner, is the "Adventures of an African Slaver," by Theodore Canot (Albert and Charles Boni), reviewed in the February issue.

C. C. C.

Books in Brief

THE FLIGHT OF THE SOUTHERN CROSS, by C. E. Kingsford-Smith and C. T. P. Ulm. \$2.50. 295 pages. New York: Robert M. McBride and Company.

ASIDE from twenty-two pages giving the actual log entries of this airplane on its journey from California to Australia this account has no special merit. The authors, with two American companions (a navigator and radio operator, to whom they give due credit), flew the 8,500 miles with two intermediate stops at the Hawaiian and Fiji Islands, truly an astounding accomplishment. They stress the careful preparation they made for their flight but their book bears the earmarks of hasty writing and it sorely lacks an index.

COCHRANE, THE UNCONQUERABLE, by Archibald D. Turnbull and Norman R. Van der Veer. \$2.50. 319 pages. New York: The Century Company.

UNJUSTLY deprived of his native British honors, red-headed Admiral Tom, seafighter extraordinary of the Napoleonic era, emigrates to South America. There he commands the Chilean fleet and whips the Spaniards. Afterward he takes over the Brazilian fleet and whips the Portuguese. Then all is well and he is able to go back home.

(Concluded on page 494)

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Eventually, aided by Lady Kitty, his faithful spouse, he again obtains caste in England, is restored to the Bath and the Royal Navy list, resumes his heritage as tenth Earl of Dundonald, is named commander-in-chief of the North American and West Indian Squadron.

Mr. Turnbull recently was the biographer of a less rough and tumble existence. His "John Stevens: An American Record" was commented upon in The Review for January, 1929.

THE TURNING POINT OF THE REVOLUTION, by Hoffman Nickerson. \$6.00. 500 pages. Boston: Houghton Mifflin Company.

P RIMARILY the book, thoroughly packed with details, treats of the Battle of Saratoga and of unfortunate Lieutenant General John Burgoyne's part in it. As the central figure of a military disaster ranked as one of the fifteen decisive battles of the world, his permanent place in history was assured.

The author, who served on the general staff of the American Expeditionary Force during the late war, has done a thoroughgoing piece of writing. In content and literary style, this book takes first rank among the great number already existing about the campaign.

THE PROFESSION OF ENGINEERING, edited by Dugald C. Jackson, Jr., '21, and W. Paul Jones. \$1.50. vii+124 pages. New York: John Wiley and Sons, Inc.

W ITH this collection of essays from the pens of such well-known men as Daniel Webster Mead, George Hale Barrus, '74, John Hays Hammond, and President Hoover, the editors have attempted to explain the various kinds of engineering.

OPERATIONAL CIRCUIT ANALYSIS, by Vannevar Bush, '16. \$4.50. x+392 pages. New York: John Wiley and Sons, Inc.

P ROFESSOR BUSH, who, in the absence of Professor Dugald C. Jackson, will, during the coming year, be Acting Head of the Institute's Department of Electrical Engineering, has in this book presented an extension and codification of the mathematics of operational circuit analysis which have grown up since the original work by Oliver Heaviside. Says the author: "I have attempted to include all the essential features of the Heaviside type of operational analysis, and to show their dependence upon the classic processes which constitute their background. This may make the reading difficult for those students who meet certain branches of mathematics for the first time; but it will serve a useful purpose if it demonstrates the usefulness of extending their mathematical equipment along the lines indicated. After all a little mathematical knowledge can be a dangerous thing, and the use of operational methods except for pure computation should be accompanied by an appreciation of the logic of more than simple algebra."

Professor Norbert Wiener, author of the article "Einsteiniana" in the May issue of The Review, has contributed an appendix treating of certain mathematical points in the text. "I did not know an engineer and a mathematician could have such good times together. I only wish that I could get the real vital grasp of the basic logic of mathematics that he has of the basic principles of physics," remarks Dr. Bush of his collaborator.



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THE TECHNOLOGY REVIEW

SUPPLEMENT

NEWS FROM THE CLASSES AND CLUBS

1874

The members of the Class of '74 were deeply grieved to learn that George Hale Barrus, who had been President of the Class for a number of years, had died suddenly on April 3, at his residence at 1892 Beacon Street, Brookline, Mass. He was the son of Hiram and Augusta (Stone) Barrus and was born in Goshen, Mass., on July 11, 1854. He removed with his parents when a child to Reading, Mass., and received his preparatory education in the public schools of that town.

He was graduated at the Institute in the Class of '74, receiving the degree of S.B. in the Department of Mechanical Engineering. He remained at the Institute for a few years as an assistant in the newly created steam engineering laboratory. He then entered upon the practice of his profession and so continued until his death, and acquired therein much distinction. He wrote several professional books and contributed many papers to the technical press and to the *Transactions of the American Society of Mechanical Engineers*. He received a personal letter from President Roosevelt asking him to serve on the National Advisory Board on Fuels and Structural Materials and to look up properties and methods of use. He was also a member of several professional and social clubs. He married on October 2, 1897, Miss Louisa C. Williams of Syracuse, N. Y., who survives him.

A lunch of the Class was held at the Boston City Club on May 17, the following five members being present: Bouvé, Chase, Nickerson, Read, and Russ. The gathering was largely reminiscent of its President, Barrus.

The Class chose as its President, William E. Nickerson, who entered the Institute in October, 1870, as a member of the Class of '74 and who had attended for many years the meetings of the Class whenever possible. Will Nickerson is well-known for his long and important connection with the Gillette Safety Razor Company of Boston and also for his benefactions to the Institute and to Boston University. — The Class is still going strong, although it is somewhat handicapped by Anno Domini. — CHARLES F. READ, *Secretary*, Old State House, Boston, Mass.

1875

In the May issue of The Review is a tribute to Charles Warren Goodale, who died on April 11 at the Lenox Hotel, Boston, after being confined to his room for more than eighteen weeks. In his passing to the long sleep Technology has lost a distinguished Alumnus and the Class of '75 our most beloved member. To me he was like a brother and he was the last of my contemporaries of the mining camps. "Uncle Charlie," as he was familiarly called, was frequently spoken of as the foremost citizen of Montana, maintaining his residence in Butte, although in late years he was seldom there. He was the angel of the boy scouts, leader in up-building undertakings, founder and mainstay of the flourishing Montana Society of the M. I. T., ever in the lead of deserving causes, always avoiding publicity for his benevolences. To know him was to love him. He was of the few mining engineers who, from the day he graduated to the end of his active career, followed his profession continuously, and never sidestepped to other work.

The will has not been probated, but I am authorized to say that he has given \$50,000 to the Institute, either for the Dormitory Fund or the Endowment Fund, as the trustees may elect. He took a keen interest in the proposed dormitories, being the largest contributor to complete the allotment of the Class. One of our last talks was that '75 should make good on this score by the time of the annual meeting in January, which was done and greatly pleased him. This was the first class meeting he had missed for years, and he often crossed the continent to attend Technology reunions. The last time I saw him he gripped my hand — to the end he had a grip which surprised the doctor and nurses — saying, "Henry, tell the boys I am sorry not to be with them." His brother, William, died a few days after the funeral and David Goodale is the last living of three brothers and two sisters.

Hibbard and his good wife returned home from their Mediterranean cruise *de luxe* two hours after the Goodale funeral. They had a wonderful experience, good as a play to hear their telling. While

away "the boys" piled up orders so that the Lawley plant has 800 men building pleasure yachts, a top record. Their son, Henry Bartlett Hibbard, was married to Ruth Drown of Newton Center on May 25, the most pleasing news Tom had in mind.

Wilfred and Mrs. Lewis are booked to go to Tokio in October for the World Engineering Congress and afterward to continue around the world, to be away eight months. Lewis is a delegate to the Congress for the Taylor Society. Professor Emeritus Bobbie Richards and Professor Jackson, Head of the Department of Electrical Engineering, will also represent the Institute in Japan. I am half persuaded to go, having given up my residence in Greenfield. In July and August, the College Club, Seattle, Wash., will find me promptly. Until otherwise advised, my official address is as follows. — HENRY L. J. WARREN, *Secretary*, 1019 Beacon Street, Brookline, Mass.

1881

In a letter from Stephen Townsend dated May 11 to your Secretary was the following: "How charming your little article was regarding Fred Bullard and the Stein Song that appeared recently in one of the daily papers (and in the '81 Class Notes for May) and for my humble association with it, permit me to express my sincere appreciation.

"Dear Fred — can he ever be forgotten, especially by those who knew him and his music and loved both? Age may creep apace and change the order of things, but, thank God, memory still is ours and restores to us many happy hours of the past." — FRANK H. BRIGGS, *Secretary*, 390 Commonwealth Avenue, Boston, Mass.

1883

The Acting Secretary decided that as the years are rapidly going on, and the members of the Class are no more active than they used to be, annual reunions should be held on paper, and in March wrote to the different members of the Class to this effect, asking them to furnish such items of interest as they would like to have imparted to their fellow members. With its customary alacrity, the Class failed to respond,

with the exception of a few members. The following letter was sent out April 4 and brought results: "How the mischief can you expect me to do anything as Class Secretary if you don't answer my letters? Stationery is comparatively cheap these days, and a postage stamp does not cost more than two cents. I have not yet received an answer to my letter of over two weeks ago, and the Secretary expects every man to do his duty and reply promptly or else he is going to chuck the job. If I do not hear from you by the tenth, I am going right ahead with my Class Notes for The Review and will use my imagination in writing about you. I would just as soon write fiction as facts."

On April 6, Bryant wrote: "I cannot think of a darn thing that has happened to me or mine during the past several months that is worth recording on the pages of history or The Review. Since I have become a gentleman of leisure, life has become rather unexciting, variety being provided by an occasional trip with my wife, chiefly by auto. Since our jolly reunion with you last June, we have motored to central New York, the Berkshires, the White Mountains, Cape Cod, and other trips. On our visit to the last named region, we stopped at Hyannisport, and stayed with the Gales at 'The Gables' where we had our 1923 reunion. Mrs. Bryant and I are planning a trip to the Pacific Coast, to be gone six or eight weeks."

A long letter from Eppendorff, dated April 8, tells us that since our Fortieth Reunion the main event of his life has been the marriage of his daughter, with the net result of two fine grandchildren, one about two years old, named John Howland Osgood, and the more recent one named Howard Lawrence Osgood. The older one is already slated for Harvard '50 and Technology '52, either in engineering or aviation. As assistant manager of Flint and Kent, a quality retail store of Buffalo, Eppendorff finds his technical training at Technology often useful in charting and budgeting sales, expenses, and all the thousand and one items of modern business. His aesthetic proclivities find play in merchandizing in several of the departments, especially those pertaining to household furnishings. . . .

His club memberships include the Saturn, the Pundit, the Buffalo Society of Artists, and the Studio School of the Theatre. In amateur theatricals he has always been interested since the days of supping for the Mapleson Opera Company at the old Boston Theatre. He and Mrs. Eppendorff are regular first nighters, and enjoy almost as many thrills as when they used to be behind the footlights. Eppendorff remains a good Unitarian, and greatly enjoys the good sermons of Mr. Palfrey Perkins, for many years associated with the Unitarian Church at Weston. Regarding Technology he states as follows: "I am rather out of touch with Technology as it is now constituted, although I greatly enjoy The Review as it comes out and pass it on each month to

the Nichols School, a boys' day school on the outskirts of Buffalo, hoping in this way Technology may interest some future student. I see practically nothing of old Technology classmates, my journeys eastward for vacation giving me small opportunity to foregather with such men as I knew who are still living in and around Boston. I have occasionally corresponded with Smith and Litchfield '85, but I have been unfortunate in missing them on my trips."

On April 10, Frank Tenney wrote from Haverford, Penna. We all know that when Frank was with us at Technology he was somewhat of a high flier. His letter proved that he is flying higher than ever. This is what he said: "Sorry to have been so slow in answering your letter. Early in the winter I visited Havana, Palm Beach, and Miami. I had the delightful experience of flying from Havana to Miami. I would advise any one who has this opportunity not to miss it. With best regards to the boys." — Underwood wrote on April 9 that he was surprised that two weeks had passed since he received my first letter. He and Gale were the only representatives of '83 at the Alumni Dinner.

Gale wrote: "Underwood has probably told you that I was at the Alumni Dinner with him. The dinner was so appetizing and served in such large quantities, that I fear I must have been a little imprudent, and I have not been able to write anything since. Besides that, the suppression of bill boards and attending to town matters have not left me any time to send a message to my classmates." — Harvey Chase has been having a hard time of it. Early in the year he went to Johns Hopkins Hospital to obtain treatment for ulceration of the stomach, and Mrs. Chase wrote on March 18 that Harvey was walking around, but had been forbidden to have anything to do with any kind of business. Your Secretary had the pleasure of visiting Mrs. Chase in St. Petersburg on March 19. She had received very reassuring news of Harvey, and expected him shortly to be there recuperating in the genial Florida sunshine, which Harvey has told us so much about.

A year ago at the Class Reunion, Harvey Mansfield was declared officially dead. Your Secretary had the pleasure of seeing him very much alive in Tampa, Fla., on March 19. Harvey has changed very little in appearance, and looks very well. The Florida climate seems to agree with him. He is living with his son at 1532 Spruce Street, Tampa. He is very much interested in some phosphate lands at the present time.

A letter from Charles P. Smith, son of George A. Smith, brings the news that George and his daughter started on the S. S. *Franconia* in the middle of January for a trip around the world and are not expected back again until about June 1. It will be noted that George took care to get on a boat sailing under the British flag instead of under the Stars and Stripes. — George A. Scott, Great Scott, says that he is so busy he can't write to anybody. If any member of the Class would

like to know what he looks like these days, send him his address and Scott will send his photograph from his studio in Philadelphia. — At our Forty-Fifth Reunion Davis, Fuller, and Hutchings were declared officially dead.

Winthrop Alexander wrote the following interesting letter: "Your appeal for news from this particular member of the Class induces me to send you a few lines, so that some of my former classmates who have perhaps almost forgotten me will be reminded that there is such a person. Like many others, I have been so situated that it was practically impossible to attend class reunions. I have been at Rutgers University as Superintendent of Buildings and Grounds and my duties around Commencement time have prevented me from going anywhere else. In fact, that season for the past twelve or fifteen years has been the busiest for me of the whole year, so that I have been obliged to take my vacations later, usually in October. I now find myself back in Washington, after an absence of over thirty years, and it seems like getting home. I live quite near where I did before and walk to work every morning down Fifteenth Street, the same route I used to take. I am connected with the construction of the new Department of Commerce Building, a modest little edifice which will cost \$17,500,000 and take about three years to complete. . . .

"This is a beautiful city and I am delighted to be back here. I attended the Annual Technology Reunion here this winter, the first thing of the kind I have been to for many years. An '86 man induced me to go and I am very glad I did, as I met several men I knew including Professor Tyler and his wife, both of whom were of about our vintage. I found to my surprise that I was the only member of the oldest class present. I hope your class reunion by correspondence will be a success and think it is a good idea."

Dwight F. Boyden wrote as follows: "You are a dandy to bob up serenely, and may your shadow never grow less! News of myself there is little, except that I am still here and going about the same pace. One thing that will cause a surprise all down the line is that I have waked up to opportunities enough to get out some patents. I let some things get by me in old Technology days, and perhaps would have done so now, only a golf club manufacturer took an idea of mine for a cane and hickory golf shaft and got out a patent on it while I was in a hospital having a major operation. I recovered from the operation all O.K. and came out of the hospital so fighting mad at what I found that I spoiled that man's patent by going round it and making a much better shaft, and then took his patent away from him in a priority suit. He settled out of court."

"This little idea may be of interest to some of you, so an explanation is following. The old cane shaft made up like a fishing rod of six tapered strips when flexed, as in a stroke, set up a lot of internal stresses as the planes of no two strips worked in the same plane, and

1883 Continued

the torsional strain on the waist section of the shaft made by hitting a ball off center of the shaft helped the disintegration. Good, get around it, a cane shaft never broke, so the material was all right. First get rid of the glued-up sections in the waist of the shaft, and get the planes of all the sections in the plane of the flexation of the shaft. Now, tail end first, laminate the cane on its curvature and cut it into a wedge and insert it into a wood shaft, stop the cane at the waist and so place the wedge that the planes of the laminations coincide with the plane of flexation of the shaft. It works well and stands up perfectly. . . .

"I made a trip out in Montana last year, and went over the divide by pack train. My son and daughter were with me and we had a bully time. It was mighty rough going, but it seemed to agree with me. Still, ten or twelve hours a day in the saddle is a bit of a stretch for men who date back to before the start of the Civil War. By the way, I have moved away from Boston and my address is now P. O. Box 55, Annapolis, Md., where you may direct letters to me in the future. Don't worry about getting into the old boy class. We have all been there for years; got in so gradually we did not know it, and some of us haven't waked up to it yet. Don't spill the beans to them."

Vose wrote from the Copley-Plaza as follows: "I have just received yours of the fifth from Edgartown. We have been camping out here in Boston since December 1. I have but little of interest to write about. Last summer I took a trip to the Hawaiian Islands. As my wife could not go with me, I took a grandson along. We found the islands most beautiful and far surpassing our anticipation. On the way out we took in the Glacier Park and Canadian Rockies, and on the way back the Grand Canyon and Yellowstone Park, thus using up the whole of the boy's vacation. I am trying to keep my mind and body properly exercised. I see, every day, old fellows forty-five and fifty years of age who are a whole lot older than I feel."

Henry A. Francis is now living in Pittsfield, and states that the company with which he has been associated for many years has been liquidated and he is now enjoying a rest from which he is deriving much pleasure, living among his friends in his home town where his people have been since its beginning. His affiliations keep him busy and interested. — Lawton wrote that he generally goes to Spain or Italy for two or three months, and as soon as the weather gets good in the spring he is going to play golf. He called to the Secretary's mind an expedition in our student days, after pyrites near the old powder house in Somerville.

W. C. Merryman wrote as follows: "I did not answer your letter of two weeks ago because there was nothing to write. I am simply going along about the same as for the past several years, building subways or making changes in them. Of course we are getting a little older all the time, but I do not notice much difference

on that account, and am taking everything as it comes. I am still able to keep up with many others who are considerably younger."

Edward F. Stevens, of the firm of Stevens and Lee, has sent the Secretary a bunch of reports, showing the splendid work he has been doing in connection with modern hospitals. He wrote as follows: "I don't blame you for getting impatient with some of the old fellows of '83. I carried your letter around thinking that I would get some time to say something interesting, but I am just going to throw this into the dictaphone and confine myself to just a few facts. As you know, the Class was drawn from all parts of the United States and immediately scattered. As you also know, in those days each section seemed to flock by itself and for many years I really did not see any one except those in Course IV, and about the only one from that Course of whom I still keep track is Alexander Jenney, who is now Assistant Professor in the Department of Architecture at Technology. Many of them have passed on, and mighty few of Course IV were ever able to retire on the products of their practice. The architect is generally a poor man. . . .

"Just a few months ago the third edition of my book, 'The American Hospital of the Twentieth Century,' was put on the market, and I think that through this book I have been able to reach and preach the gospel of good sanitation and hospitalization to all parts of the world. Perhaps a little biography contained in the publisher's notice, which I enclose, will show something of my activities. Wishing you success in your Letter Reunion and my kindest regards to all the fellows of '83."

Those of us who worked in the laboratory will remember Hardon. On April 11, the Secretary received a letter from Robert Wallace Hardon, M.D., 24 Wabash Avenue, Chicago, Ill., in which he says: "I have received your letters of March 18 and April 4. I knew you were going to spring something of great importance as indicated in the last paragraph of your second letter. As a fiction writer I know you will be a great success, as you have been and are in many other things. I shall try and secure a copy of your novel when it is accomplished. As to myself, there is very little to know. I am still plodding along, trying to do what I can for humanity and get some satisfaction in looking back on the work which I have done to help mitigate the ills of those with whom I have come in contact. My autumn is now approaching and I cannot do as much as I have done in former years. When I think of the wonderful things that many of my classmates have accomplished, I feel that my efforts have not produced as much in the world as many of them. I wish to thank you for remembering me, and when I am in New York next time I am going to come in and clasp your hand."

A letter from Mrs. Harry Boon, dated March 19, tells us that Harry passed away on December 8, 1928. With the

passing of Boon, we have all lost one of the most picturesque and best remembered characters of our freshman year.

E. L. Tuttle wrote on March 21 from Waterbury, Conn., that he has been in the banking business for the past twenty-five years, and has been City Treasurer for over twenty years. He is now Secretary of the Waterbury Trust Company. He belongs to the New Haven County Technology Club, the Masons, the Elks, and the Country Club of Waterbury, where he shoots golf around eighty, besides being Secretary and Treasurer of the Poback Fishing Club. He is sixty-two and has a married son. He very seldom gets over to Boston except on the way to Maine on a fishing trip. Strange to say, he has never yet seen the new Technology.

Miss Clara M. Pike wrote from Pine Tree Lodge in Hampton, N. H., on March 30, and told of the great assistance which she received from Technology during her period as Instructor of Natural Science at Wheaton College. Among her students were Miss Mary Floyd, who is now principal of a well-known school at Los Angeles, Calif.; Miss Emily Hartwell of missionary fame in China; and Miss Mary E. Woolley, President of Mt. Holyoke College, South Hadley.

The Acting Secretary has not a great deal to tell about himself. On a motor trip last July, with Mrs. Wesson, we skidded off a bad road near Greenfield. The result of the autopsy showed a badly damaged car, and one or two broken bones and a cut which were distributed between Mrs. Wesson and myself. We spent a very pleasant week in the Greenfield Hospital and came home by way of train. With the exception of various trips, things have been going along quietly in Montclair ever since. We have just returned from a motor trip to Florida where we had a most enjoyable time and no accidents. The latch string is out at our home in Montclair for any members of '83 coming this way, and it is trusted that they will make it a point to call on the Acting Secretary. — DAVID WESSON, *Acting Secretary*, 111 South Mountain Avenue, Montclair, N. J.

1884

Word has just been received of the death of Samuel P. Poland, Course I, at San José, Calif., on January 20, 1928, aged seventy-two. No information having been received from him for many years, your Secretary wrote to the Secretary of the Zeta Psi fraternity of which he was a member at Bowdoin. A late address was given, with the suggestion that the national fraternity be appealed to, with the above result.

News has been received about Torei in a similar manner. He was considerably older than the rest of us, of a rather shy, retiring nature. Your Secretary wrote to the Secretary of the House of Peers of Japan and promptly received information that Torei died in 1913, aged sixty-seven, leaving a son Tadakazu, who has succeeded to the peerage and is director of a plantation of the Mitsui Gomei Company, Ltd.

1884 Continued

The Secretary was interested to know that Major General Weston was awarded a Congressional medal of honor in 1898 for gallantry at Wetumpka, Ala., in 1865 — thirty-three years afterwards. Who says republics are ungrateful?

The forty-fifth year booklet has finally appeared and letters of surprise and acknowledgment are being received — surprise that we have grown so old. Bunce astonished the Secretary by writing that on July 12, 1923, he married Miss Wila Turner Heilbron. The Class extends its felicitations.

Information is desired of Dr. O. G. Burgess, Miss E. O. Conro, P. L. Fong, E. C. Hillyer, S. M. Ilsley, K. Y. Kwong, J. H. Penny, W. B. Price, and W. B. Smith. News is also desired of the children of Callahan, Carr, Goodrich, Kennard, and Otis. — AUGUSTUS H. GILL, *Secretary*, Room 4-047, M. I. T., Cambridge, Mass.

1885

The impending departure of President Little for London, where he is to preside at the annual meeting of the Society of Chemical Industry of Great Britain, was in the minds of all at the annual dinner on May 24, but although the parting gifts bestowed on him were of an amusing character, there was an underlying note of congratulation for him and satisfaction for the great honor he has brought to the Class. Professor Norris, who was our guest a year ago, rose to the spirit of the occasion, and as he has had wide experience in hobnobbing with royalty was able to give him some useful information on the crowned heads, insects and bathing customs in the heathen lands of Europe where towels are museum pieces and there is a woeful ignorance on the subject of prohibition. Horace Ford, who is the eighty-fifth of all the Eighty-Fives, having been born that year, gave us a talkie in color about some interesting features of the Institute that aroused the greatest interest. The picture he presented was one to inspire confidence and enthusiasm for our Alma Mater. As is our custom, the latest news from each member was given at roll call, and telegrams and letters read. It was voted to extend our affectionate congratulations to Mrs. Anthony, Mrs. Little's mother, who was voted into the Class on her eighty-fifth birthday and who is now eighty-nine.

A committee was appointed to arrange for the Forty-Fifth Reunion next year, consisting of Frazer, Brown and the class officers. Ev Morss was elected President and Dewson as Treasurer. Those present were: Bedlow, Brown, Dewson, Frazer, Hildreth, Litchfield, Little, Pierce, Plaisted, Pratt, Rawson, Schubmehl, Sweet, Worthington, and our guests, Professor Norris and Bursar Ford, with C. C. Pierce '86, who was shanghaied in to say grace!

W. D. Fuller writes that he is now at 132 Spruce Avenue, Inglewood, Calif. — Dewson, who was in Washington a week ago, called on Charlie Allen and Fred Newell. In reply to a request for personal news, Allen sent the Secretary an attractively printed volume of eighty pages, an

appreciation from the National Association of State Directors of Vocational Education in recognition of his services on the board. There are articles by a number of nationally known state directors covering Charlie's activities in the various fields related to vocational education.

Bartlett writes that he was the only '85 man at the New York Technology Dinner in March, and that Dan Lufkin had just moved into a building 300 feet south of his office at 10 East 40th Street. — Jim Kimball is still at Coral Gables, Miami, Fla. — Bob Richardson has just returned from Brazil after a 35,000 mile trip to South American points, but keep it dark, he may be trying to avoid somebody. — Arthur Hunt sent congratulations to Arthur from Oakland, Calif., where he is at present sojourning. — Dave Baker says he is feeling fine and is looking forward to the reunion next year.

Nat Robertson has writer's cramp after writing all those clever red-edge shovel advertisements, and is manually speechless. — Arthur Little made an address at a dinner in connection with the Exposition of Chemical Industry in New York a week ago on "Science — the Fifth Estate." — Tracy Lyon is still with Walter Chrysler at 347 Madison Avenue, New York, and sends his love to all you old gentlemen.

Although Robert Goodrich passed away in 1927 it was only recently that Ed Dewson discovered it and secured the following facts: "Robert Rhea Goodrich was born in Hartford, Conn., April 18, 1864. He received a B.S. degree in mining engineering in 1885, in mechanical engineering in 1901, and M.S. in electrical engineering in 1902 from the Institute. He received a Ph.D. degree in metallurgy from Columbia University. He served as mining engineer and manager of collieries in the Pocahontas coal fields and Elk Ridge colliery. From 1896 to 1898 he was mining engineer and superintendent of the Hecla Mining Company, Chihuahua, Mexico, the last ten months as superintendent. He was appointed head of the department of mining and metallurgy, and was in charge of the Bureau of Mines and Assaying at the University of Arizona. Later he became professor of metallurgy and research at the University of Idaho, and was active professor of metallurgy in 1918 at Stanford University, Calif. At the time of his death, on August 10, 1927, he was chief chemist of the phosphate department, Washose Smelter, Anaconda Copper Mining Company, Anaconda, Mont., and was also interested in mining and milling in the Southern Cross, Mont., district. Mr. Goodrich was author of several pamphlets and articles appearing in trade journals dealing with various phases of mining and metallurgy. He became a member of the A. S. M. E. in 1903, and was a life member of the A. I. M. E."

Eleazer B. Homer died at the home of his son at Larchmont, N. Y., on February 12, 1929, but the news of his passing only reached the Secretary recently. Since overseas service with the Fifth French Army, as Y. M. C. A. secretary, Homer

had been in ill health, having contracted influenza overseas, and spent three months in a hospital. Chronic bronchitis had resulted and had become aggravated in the last year. He is survived by one son, Arthur B. of Larchmont, N. Y., and three daughters, Mrs. Roger Tilestone of Boston, Mrs. Walter Hayward of Sharon, Conn., and Mrs. Gordon C. Henley of West Barrington.

After his graduation from Technology he served as draftsman for two and one-half years with Hartwell and Richardson, architects, of Boston, and from 1887 to 1915 he was an instructor, assistant professor, associate professor, and lecturer at various times at Technology. He maintained an office in Boston from 1894 to 1900, and from 1900 to 1906 he was the director of the Rhode Island School of Design at Providence. He was architectural adviser to the Government of Porto Rico in 1906 and 1907, and chairman of the Porto Rico Capital Compensation Commission in 1907. In 1906 he moved to Providence, R. I., and entered the architectural firm of Clark, Howe and Homer. Since 1912 he maintained his own office and his work included some of the finest residences and public buildings in the state. He served as chairman of the Providence City Planning Commission from 1915 to 1918. — ISAAC W. LITCHFIELD, *Secretary*, Hotel Wadsworth, 10 Kenmore Street, Boston, Mass.

1887

Very little has been heard from any of the members of the Class since the last letter. Arthur R. Nickels, however, writes very interestingly to President Taintor from Bernard, Idaho, where he listened in on the Sharkey-Stribling fight on the evening that he was writing his letter, and heard every word perfectly. He was in Tyrone, N. M., for a time on experimental work for Phelps Dodge, and leaving there, spent six weeks with a gold mine in Central Idaho, when the property closed down. From there he went with the Bunker Hill and Sullivan at Kellog in their laboratory; from there was sent by the same company to his present location, a zinc and lead mine, where he is doing the assaying. In addition to the above career in the mining game, he spent eighteen years on an apple orchard in the Hood River Valley, Ore.

Your Assistant Secretary has just returned from a motor trip of 1,365 miles to Richmond, Virginia, and return, where a delegation from the Second Corps Cadets Veteran Association of Salem, Mass., were guests of the Richmond Light Infantry Blues at their 140th anniversary celebration. The affair, which was participated in by very many of the older military organizations, including about fifteen of the units of the Centennial Legion, lasted three days, and included a review by the Governors of Virginia and Connecticut, an excursion to Williamsburg, Jamestown, and Yorktown, a military reception and ball, and church service on Sunday forenoon, followed by a lunch at the Massachusetts Club. The writer in his twenty-five or more years of

1887 Continued

military service has had many interesting and enjoyable experiences, but for genuine hospitality and whole-hearted generosity and fraternal spirit of the hosts of the occasion, he is compelled to admit that he has never seen the equal of that of the Richmond Light Infantry Blues.

President Taintor has been spending a week in Washington, on business and pleasure. — EDWARD G. THOMAS, *Secretary*, Toledo Scale Company, Toledo, Ohio. NATHANIEL T. VERY, *Assistant Secretary*, 96 Bridge Street, Salem, Mass.

1889

The annual dinner was held this year on March 5 at the University Club. Those present were: E. V. French, Hollis French, Fiske, Gleason, Hunt, Kilham, Kunhardt, Laws, Lewis, C. G. Norris, Orrok, Sauveur, W. L. Smith, Thurber, Truesdell, Underhill, and Wales. The administration was requested to formulate plans for the Fortieth Anniversary this summer.

The Class will be glad to know that Hobbs, after a long stay at the Massachusetts General Hospital, following his being run down by an automobile, is now around again and looking finely. Those who did not have the privilege of visiting Frank at the hospital and seeing him in a cast with his legs rigged up with weights, pulleys, and cords, but nevertheless receiving callers, dictating letters, cracking jokes, and giving orders by telephone, will never know what a really high grade executive looks like. Bob Washburn in the Boston *Evening Transcript* treated the subject as follows: "F. W. Hobbs broadcasting. Main Studio, Phillips House." This is a veritable cheerio, by telephone. Eight weeks ago last Tuesday night, at 6 P.M., as he was carrying a dog in his arms, he was struck by a taxi, skidded forty feet, and has been in dry-dock at Phillips House since. He hopes to be floated February 1. The dog was uninjured. The S. P. C. A. will rejoice. Mr. Hobbs has moved out of Beacon Street into a tenement on Commonwealth Avenue. He was crossing the street in that vicinity.

"During this time Mr. Hobbs has been flat on his back, his limb, not leg in Boston, drawn out by a weight. It is the first time this member has been pulled by anybody or anything. It is not ductile or easily pulled. The President has sent him roses, their bond that the President's limb has never been pulled, not even by a weight. Shortly after Mr. Hobb's arrival at the hospital a Bishop of the Protestant Episcopal Church called on him. Such a call from such a character at such a time would have perturbed some anxious spirits who attach undue value to life. But not Mr. Hobbs.

"Franklin W. Hobbs, Esq., and the Hon. Charles Sumner Hamlin were both born on St. James Street in Roxbury and both were baptized in the nearby Episcopalian church. Evidently the serum did not take with Mr. Hamlin, for he went into the Democratic party. Mr. Hobbs became a Republican and a trainer of political colts, his stables in Brookline.

He sent the late Prentiss Cummings and other patriots to the State Senate. When the latter did not sit there he sat in the offices of Kidder, Peabody and Company. Mr. Hobbs is an engineer by education, not locomotive. He is the intellect of the Arlington Mills, which employs seven thousand operatives.

"He is the consort of Jane Whitman Hobbs, who wears the diadem at 46 Beacon Street, which ought to locate Mr. Hobbs. . . . Nevertheless, he is doing more work on his back than most men do in their chairs. He pulls more than his own weight in the boat. More than this, he is a big-hearted citizen. . . . And now come the words: 'R. M. Washburn signing off.'"

Harrison G. Dyar died on January 21. The best mention of the subject that has come to the Secretary's notice was by L. O. Howard of the United States Department of Agriculture in *Science* of February 8. "A man died in Washington on January 21 who was known personally to comparatively few scientific men although his work had made him famous in a growing field. Dr. Dyar was born in New York City, February 14, 1866. His father was a famous inventor, who is said to have disputed the priority of S. F. B. Morse's invention of the electric telegraph, and who undoubtedly made a fortune by inventions relating to dyes. Young Dyar was educated at the Roxbury Latin School, at the Institute, and at Columbia University. He took his Bachelor's degree at the Massachusetts Institute of Technology in 1889. In 1893 he returned and took the last year of its biology course, going the next summer to Woods Hole. He then went to Columbia University, gaining his A.M. in 1894 and his Ph.D. in 1895. In 1894 he published an important paper on the classification of Lepidopterous larvae, and in 1895, after research work in bacteriology, he published his thesis, which was entitled "On Certain Bacteria from the Area of New York City." This study pointed out certain things with regard to the supposed specificity of bacteria and their variability which were not in accordance with the general opinion of that time. Recent writers, however, have changed the general view and refer to this early paper of Dyar's with distinct approval.

"His work on Lepidopterous larvae attracted the attention of entomologists, and, meeting him in 1897, the writer invited him to come to Washington. The invitation was accepted, and he became custodian of the collection of Lepidoptera in the U. S. National Museum, a position which he still held at his death. For a comparatively short period he was in charge of the whole of the insect collections of the museum. . . .

"When the Carnegie Institution of Washington made its first grant to the present writer for the preparation of a monograph on the mosquitoes of North and Central America and the West Indies, Dyar was chosen to do the work on the larvae; Frederick Knab was later associated, and the two in collaboration are mainly responsible for the taxonomic

portions of the extensive four-volume work on this subject published from 1912 to 1917 by the Carnegie Institution.

"Dyar's financial means were such that he was not hampered in his work by salary necessities, and during the major part of his thirty-one years of life in Washington he received no compensation for his work, although for a few years he was on the rolls of the Bureau of Entomology of the Department of Agriculture. He was consequently able to take long field trips at his own expense, to investigate regions where field study was needed, and he thus became acquainted with local conditions over a vast extent of territory. . . .

"In the years between 1917 and 1927 there was great activity over the world in mosquito study. New forms came to light, not only in the regions included in the scope of the Carnegie monograph, but in South America and in other parts of the world. A mosquito taxonomist of great ability appeared in the British Museum of Natural History (F. W. Edwards) and, working largely with the Old World fauna, he arrived at conclusions coinciding in the main with those reached by Dyar. With the incoming of material from South America, and with the publication of the excellent 'Monograph of the Mosquitoes of Surinam,' by the Bonnes, the necessity for a supplemental volume to the Carnegie monograph became apparent. The interest of Dr. J. C. Merriam was enlisted and the consent of the trustees of the Carnegie Institution was gained for the preparation of a volume to include the mosquitoes of all the Americas. Dr. Dyar was a tireless worker, and by the close of 1928 he had completed the volume and had seen it published. . . .

"Thus has ended a life of intense scientific activity and one which undoubtedly has made important contributions to human knowledge."

Bosworth, who is now living at 198 Avenue Victor Hugo, Paris, married Mlle. Renée Oberlé, and has a daughter, Françoise Mariette, born December 14, 1928. A vote of approval was passed at the class dinner. — The sympathy of the Class goes out to Beals whose wife, Helen Drake Beals, died on January 17 after a long illness. Beals has tendered his resignation of his present pastorate in Manchester, N. H., to take effect on May 31. — Hunt, Kilham, Lewis, Spaulding, and Williston were at the Annual Alumni Dinner.

George A. Orrok has opened consulting offices at 52 Vanderbilt Avenue, New York. His Paris office address is 1 Square Delambre, Paris, 14E, France, where he has associated with him A. L. Helwig, well-known consulting engineer. — H. Hobard Porter, engineer and industrialist of New York City, has been elected chairman of the Engineering Foundation. Officers reelected by the Foundation include: George A. Orrok and Dr. Arthur D. Little '85.

A newspaper clipping gives the following: "Frank L. Dame, one of the big business executives of the nation, is easy

1889 Continued

to talk with. As President of the North American Company, he is directing head of a public utility holding organization which serves 1,170,000 customers in California, Ohio, Wisconsin, Michigan, Missouri, Illinois, Iowa, and the District of Columbia. Mr. Dame, who is now sixty-one years of age, was born in Boston and was graduated from the Institute. He spent his early years in Portland, Vancouver, Tacoma, and other far western cities, before taking up his residence in Cleveland. Then, twenty years ago, he became Vice-President of the Electric Bond and Share Company, and later President of the North American Company. He has been active in the public utility field all his life. He also is President of Wired Radio, Inc., from which he expects great things in the near future. . . . —WALTER H. KILHAM, *Secretary*, 3 Park Street, Boston, Mass.

1891

A class dinner was held on Monday evening, February 4, at the University Club, Boston. Members present were Garrison, Tyler, F. C. Holmes, H. I. Cole, Dana, Bradlee, Forbes, Blanchard, Punchard, Edwin C. Smith, Colburn, Dart, Barnes, Bowen, Howard, Wilder, Young, Vaillant, Bryant, and Fiske. The guest of the evening was Acting Dean H. E. Lobdell '17. He gave a very interesting talk covering freshman studies and scholarship, awarding of scholarships, and the new infirmary.

Providence was well represented by Billy Dart and Edwin Smith. We were particularly pleased to welcome Smith, who has not been at any of the class functions for a number of years. Jim Swan telephoned from Newport and sent his regrets and stated that things were going well with him. He is in charge of the New England Steamship Company's plant at Newport, R. I. Arthur Hatch met with some of the men before dinner but was obliged to leave for out of town.

We were much shocked to learn of the death of George Wetherbee of Braintree. He sent in a card saying that he would be at the dinner and died suddenly the next day, February 4, 1929.

Wetherbee was born at Marshfield, Mass., the son of George H. and Martha (Bartlett) Wetherbee. He married Clara G. Simonds of Salem, on November 18, 1903. After attending Derby Academy, Hingham, and the Powder Point School at Duxbury, he took the civil engineering course at the Institute from 1887-1891. He was with the Boston Board of Survey; F. A. Barbour, C.E., of Boston; and with Charles McDermott, contractor of Brockton; and later associated with Hartley L. White under the firm name of White and Wetherbee of Braintree and Boston from 1895-1906. From 1906 to the date of his death he was engaged in civil engineering with offices in Braintree and Boston. During the World War he was in charge of the topographical survey and layout of Camp Devens, Quincy Housing Plant, and Port Penn, Del. He was also engaged in important work at Johns Hopkins University and at Amherst Col-

lege. Besides being on the school committee of the town of Braintree and the Treasurer of All Souls Church, he was a member of the Cochato Club and Delta Lodge, A. F. and A. M., of Braintree. He is survived by his wife, one son, and one daughter. The Secretary received the following letter from Mrs. Wetherbee: "Please extend to the Class of '91 our sincere thanks for the words of comfort and sympathy, all the thoughtfulness means so much, and especially from the class friends with whom George had so many pleasant times and associations."

It is with deep regret that we record the death of our classmate, William Irving Palmer after a brief illness, on February 7, 1929, at his home in Winchester where he had resided since his birth in 1869. Although afflicted with blindness during the last few years of his life, Will retained a remarkable interest in people and world affairs and was especially interested in his Class. The fact that he never referred to his affliction in any way, either at home or among friends, surely showed moral courage of a high order and a strong religious backing for his philosophy of life. Having a great faculty for making friends, he always interested himself in the affliction of others. Barnard Capen recently said that he greatly missed Will as he had called on him weekly at his hospital and spent many happy hours with him reminiscing.

The following is quoted from a Winchester paper: "Mr. Palmer was born in Winchester on March 1, 1869, the son of Irving S. and Eugenia E. (Parker) Palmer. He attended the public schools and was graduated from the Winchester High School before entering the Institute, from which he received his degree with the Class of '91.

"His business life was spent with the Charlestown firm of Palmer and Parker, mahogany importers and manufacturers, he having been, at the time of his death, Treasurer of this old business house which was established by his maternal grandfather, Harrison Parker, in 1833, and which claims the distinction of being the oldest manufacturer of mahogany in the world.

"Mr. Palmer took an active interest in the civic life of the community and many local institutions have benefited through his generous philanthropy. . . ."

The Secretary received the following letter from Mrs. Palmer: "Will you kindly extend to the M. I. T. Class of 1891, my sincere thanks and appreciation of the beautiful floral tribute? It was one of the loveliest sprays I have ever seen. Will was so fond of his classmates, the ones he knew intimately, and always enjoyed meeting them. He always had his attendant read *The Technology Review* to him and was interested in the doings of the Institute. Thank you very much for your kind letter of sympathy."

Gorham Dana is co-author of a book on industrial fire hazards which has met with a wide sale among insurance men and others interested in fire prevention. This book was reviewed at some length in the May issue of *The Review*.

The following is quoted from a letter from Robert Ball in Cambridge, England, to Gorham Dana: "The spirit of loyalty which is abroad among Technology graduates is something to be proud of, and the great position of the Institute is largely due to the support it gets from those who have passed through it. We have nothing to parallel it on this side. We are about to build a new library at a cost of 500,000 pounds, which is largely contributed by the Rockefeller Foundation for International Education. What a generous people you are! Not only building vast educational establishments for yourselves, but helping others outside your boundaries."

The following is quoted from a Lynn, Mass., paper of December 7, 1928: "'Local boy returns in triumph' is not altogether applicable to Mr. Gardner F. Wells, M. I. T. '91, the new President who has accomplished the electrification of the Boston, Revere Beach and Lynn Railroad. But for all that, the first job of Mr. Wells when he left the Institute was with the Thomson-Houston Company in Lynn as a student in the days before the General Electric Company's formation. Later he was concerned with electrifying the horsecar lines in Lynn and Salem, among other places.

"So Lynn cannot be denied a personal interest in the man at the head of the latest transportation achievement in these parts, and whose plans for further improvement promise much to this city. In completing the electrification of the 'Narrow Gauge' road, and carrying forward its modernization, Mr. Gardner Wells will set the district which he serves decades ahead. While he was born in Quincy, rather than in Lynn, his local connections have been long enough and close enough to inspire a personal pride in this man, as well as a satisfaction with his accomplishment."

Barney Capen is back at 135 Aspinwall Avenue, Brookline, after a few weeks at the Deaconess Hospital where he underwent a successful operation. The treatment which he has been having was seriously retarded because of the need of this operation and we now all hope that he will continue to progress. He is always very glad to see any of his classmates who can arrange to visit him. — HENRY A. FISKE, *Secretary*, Grinnell Company, 260 West Exchange Street, Providence, R. I.

1894

Before these notes reach the eyes of the members of the Class we shall have had our Thirty-Fifth Reunion at the place which we enjoyed so much at Osterville on the occasion of our Twenty-Fifth and Thirtieth. Unfortunately, the indications at the present writing are that the attendance will not be as large as had been expected. This leads the Secretary to believe that it may be worth while to have another reunion next year on the occasion of the All-Technology Reunion in Boston. Expressions of opinion from the Class will be gladly received and considered in planning the reunion.

1894 Continued

It is with very great regret that I announce the death of another of our members and one who has been almost constantly in attendance whenever we have had meetings of the Class. Raleigh B. Adams died on April 14 at the Newton Hospital. He had an accidental injury on January 21 and on April 8 was taken to the hospital for an operation on his leg. The operation was said to be entirely successful, but several days later a cerebral hemorrhage occurred and death followed quickly. Adams had been almost continuously engaged in the manufacture of belting and other materials made from rubber and its uses. The sympathy of the Class is extended to Mrs. Adams.

The Secretary wishes to brag a little and announce that he has been elected chairman of the Faculty at M. I. T. — SAMUEL C. PRESCOTT, *Secretary*, Room 10-405, M. I. T., Cambridge, Mass.

1895

A reunion of the Class of '95 at the Technology Clubs Associated Convention in Pittsburgh on May 3 and 4 brought together E. D. Barry, L. F. Howard, and your Secretary. Barry is still making cement, and Howard is raising a wonderful family, at the same time making signals for the railroads all over the world. While the numbers were few, the enthusiasm ran high.

Frank Bennett Sherman was instantly killed in Terre Haute, Ind., last April, when a three-story brick building was wrecked by an explosion of escaping gas. He was standing on the street when the explosion occurred, and was killed by the collapsing walls. Sherman was a native of Danbury, Conn., and lived in Oak Park, Ill. After leaving Technology he went to New York, and finally settled in Chicago. He has always been interested in the bond business. A son, daughter, and one sister survive him.

Professor Elizabeth F. Fisher has made her home in Asheville, N. C. — Samuel S. Sadtler has branched into the literary field, as editor of "Chemical Facts and Fancies," published by Samuel P. Sadtler and Son, Inc., industrial chemists.

Your Secretary trusts all '95 men will have a pleasant and restful vacation, and be rejuvenated with many news items for the fall issues. — LUTHER K. YODER, *Secretary*, Chandler Machine Company, Ayer, Mass.

1896

Charlie Hyde is still delinquent with his report on his trip to Europe. Certainly during the summer we shall expect him to have found time during his vacation to supply this long promised travelogue.

A Class Dinner was held at the Engineers Club, Boston, on April 29, with the following men present: Batchelder, Damon, Jim Driscoll, M. L. Fuller, Grush, Hatch, W. R. Hedge, Hersey, Hultman, Jackson, James, Knight, Locke, Partridge, Rockwell, Jim Smyser, Thompson, Tucker, Underhill, and Wise. The formal report of the Secretary and Treasurer was presented and quickly disposed

of. The financial condition of the Class is sound. Progress was reported on the class book, and Rockwell gave a report on the improvement of young Edwin Palmer, whom the Class is helping back to health. The chief event of the evening was the showing of the pictures of our '96 Reunion through the kindness of Henry Jackson, who brought his movie projector. This was followed by two or three very interesting reels of Jackson's trip to Europe last summer, and also a reel showing surf scenes taken at Marblehead during the heavy spring storm.

On May 7, Captain Bakenhus called on the Secretary while he was in Boston as a member of a committee of the American Society of Civil Engineers. He reported that he sees G. C. Hall occasionally in New York, and also Charlie Morris once in a while. Mrs. Bakenhus was very unfortunate in receiving a sprained ankle during the spring when she was thrown from a New York street car. Bakenhus was on the air from station WNYC in New York on Monday, April 15, at 8:15 P.M., when he gave a talk on "The Navy and Economy," under the auspices of the Federal Business Association.

On May 10, Woodwell passed through Boston on his way to New Brunswick with a party of salmon fishers but, unfortunately, the Secretary was unable to see him, much to the Secretary's regret. No report has come through as to whether Woodwell came back with a big catch. — Sager announces that he has withdrawn from the firm of Edwards, Sager and Bower, patent attorneys with whom he had been associated for a long time, and in the future he will continue the practice of patent law by himself at 225 Broadway, New York.

Charles P. Lynch, who had been living at one address in Lowell ever since he was a student, was recently reported as missing, but inquiry of the Lowell superintendent of police was successful in relocating Lynch at Piermont, N. Y. — Harry Brown started off on an automobile trip at the end of April and went as far as Virginia. He says that if Mrs. Brown missed any historical places in Virginia it was inadvertent, and nothing stopped her but fatigue. They returned by way of Washington where they took some rest. Charlie Morris and his wife dined with them while they were there. At Gettysburg Brown found many changes since his last visit to that historic place, twenty years ago, many new monuments being especially noticeable.

Charlie Morris decided not to take a chance of demotion from his office of Rear Admiral as Chief of Bureau under the new administration and asked for a transfer to the retired list after thirty years of service. This application was approved by the President and took effect on April 22, and thus Charlie retires with the full rank and retired pay of a Rear Admiral. It is understood that he planned to move to the vicinity of Boston, arriving about the middle of June. This is pleasant news as we will expect to see more of him in the future than we have in the past.

Lonngren reported from Los Angeles the latter part of April that he expected to have the construction of his steel plant under way very shortly. — J. Lloyd Wayne has a new job in that he has become President of the Nature Study Club of Indiana. He disclaims knowledge of any special branch of nature study, but thinks that the job came to him because some one thought he was an easy mark upon whom to load the duties. The club is a very active one, having between 400 and 500 members, and they take their work seriously as well as having many visits and good times.

Rockwell left on March 24 for Harri-man, Tenn., where his brother is engaged in a manufacturing enterprise in which John is interested. The floods did much damage to their plant. The water had gone above the second floor and much of the stock used for the manufacture of the wooden parts of agricultural implements was washed away. From there he went to Columbus, Ohio, to act as official at the meet for the National Collegiate Wrestling Championship at the Ohio State University. He returned home via Washington where he attended to some personal business matters. He took the opportunity to lunch with Burgess in Washington on April 1, and he also lunched with Marshall Leighton about a week previous on his way south. He found both of these fellows well and prosperous. Early in May, Rockwell went on his annual fishing trip to Chesapeake Bay with Ben Hurd and made the report that the fishing was great and the weather wonderful. He acquired a red nose from perfectly natural causes of outdoor life.

Mark Allen and Billy Anderson arrived back in San Francisco early in May from their trip around the world and then Billy made an inspection trip to some gold mining properties in California in which he is interested.

The Secretary cannot possibly approach the style of Arthur Baldwin's writing so a recent letter from him is given verbatim: "Behold below the fulfillment of my promise to hunt up Reggie Norris and to give you the low-down on his present looks and condition of servitude. Living in the cloistered precincts, as it were, you probably don't realize the amount of advance preparation required over here to get a man to lunch. France is a country where it takes a lot of talk to transact business. If you try to drop in on somebody, you find him occupied with an appointment that has been scheduled a long time ahead. And so Norris and I had quite a bit of negotiating to do by telephone before we could find a date that did not interfere with our previously scheduled dates. Finally we arranged to meet at the club that we both belong to (but where we had probably passed each other dozens of times already without knowing it — since we had not seen each other for umpty-ump years). I offered to wear a pink bow in my hair, but Norris thought that if we just hung around anxious-like, we should probably notice each other's worried look and

1896 Continued

be able to connect. Harry Clifford used to say "which, indeed, we find to be the case, and so it was with us."

"Norris is now the head Paris manager for the great German dye concern known all over the world as I. G. Farbenindustrie. Its business in France is conducted by a subsidiary company called the *Société pour l'Importation des Matières Colorantes et de Produits Chimiques* (parenthetically, you have to take a day off if you ever want to speak the full name of any French corporation). He got into his present work as an outcome of post-war activities in which he had acted as American member of the committee that allocated the deliveries of dye-stuffs agreed to by Germany under the peace treaty. Norris is just as tall as he used to be. His hair was brown in the old days, so far as I remember. Now it's the same color as mine, if you know what I mean. He says he is in the best of health and looks it. But I fear that both of us are born to be hung, for, not to mention my own experience of some years back, Norris mistook the windshield of his car for a circus hoop a few months ago. He got through it all right and his face was pasted back into normal condition by a skillful French surgeon, so that no traces of his injuries are evident except a little different appearance of the bridge of his nose, which is not quite so Roman as it was.

"Our classmates probably remember that Norris, although American by family and ancestry, was born in France because his mother happened to be there at the time. Of course he speaks French like a native, and if I could hope ever to arrive at one-quarter of his facility in this regard I should be ready for Heaven *route de suite*. He hasn't been in America since leaving it in 1917 with the American troops, and so I had a chance to tell him all about you and some of the other classmates, and about the memorable Twenty-Fifth and Thirtieth Reunions. He and I hope to foregather here ourselves once in a while to stage miniature reunions of our own, and if any '96 members, of either sex, should find themselves here at any time we hope they'll make their presence known. Unfortunately I'm temporarily on the wagon, but I know a few places where satisfaction may be assured to those who aren't."

Charlie Lawrence reports that at a dinner the latter part of April, held at the Waldorf-Astoria in New York for the Alumni and friends of the Institute, there were four '96 men present: L. A. Freedman, G. C. Hall, T. I. Jones, and Lawrence himself. Later, on April 27, while Wayne was in New York, a luncheon party was quickly assembled which included Tilley, Woodwell, Lawrence, and Wayne. Lawrence's boy, Dr. Charles K. Lawrence, now has another child, a little girl by the name of Joan, born about March 1. This makes Charlie the proud grandfather of both a boy and a girl. Charlie also sent on a clipping from a New York paper which bore the heading "'96 indicted in day" which he submitted from the New York Times.

The annual class contribution of \$50 toward Technology athletics has been transmitted to Dr. Allan Winter Rowe, and an appropriate acknowledgment in his best style has been received.

From South America came an announcement to the effect that Mr. and Mrs. Galvis salute you and are happy to announce the marriage of their daughter, Teresa, to Mr. James G. Melliush. James G. Melliush salutes you and is happy to announce his marriage to Miss Teresa Galvis. The ceremony took place on May 11, at Barranquilla.

Russell Porter has been receiving considerable newspaper publicity of late in connection with his work in designing and erecting a telescope in the great astrophysical laboratory of the California Institute of Technology at Pasadena.

Myron Fuller has given some very interesting sidelights on the trip which he and Mrs. Fuller made to the Mediterranean. Outside of the Asia Minor trip the cruise was uneventful, but it was unique, however, in being made on a freighter instead of a regular liner. The last report was that he and Mrs. Fuller left on May 17 for a three weeks' auto trip to Kansas City via Gettysburg, and the scene of Braddock's defeat and other historic spots on the National Pike in southern Pennsylvania. — CHARLES E. LOCKE, *Secretary*, Room 8-109, M. I. T., Cambridge, Mass. JOHN A. ROCKWELL, *Assistant Secretary*, 24 Garden Street, Cambridge, Mass.

1897

Arthur Hopkins attended the Technology Clubs Associated Convention at Pittsburgh, spending an evening with Howard Noble and Mrs. Noble with great satisfaction. Mr. and Mrs. Noble start for France in a few weeks to spend their biennial vacation in the lesser known parts of that fair land.

Hopkins spent a recent week-end in Cleveland and saw a good deal of Ed and Stanley Motch and George Merryweather. Ed Motch has a young giant of a son with him in business, who plays polo on the side. Merryweather has a beautiful farm in the Chagrin Valley, where he raises children, goats, and polo ponies. The children were most interesting. Ed Motch is completing a beautiful home in the Shaker Heights district, which, rumor says, he has ransacked Europe to furnish.

J. P. Ilsley recently had an interesting interview with Proctor L. Dougherty, President of the Board of Commissioners of the District of Columbia, who advised that the District has an annual budget of approximately \$40,000,000, toward which Congress appropriates \$9,000,000 only, the balance being raised by local taxes. There are three commissioners who divide the work of managing the various activities of the District, President Dougherty personally handling the Police and Fire Departments, including traffic regulations as well as many of the other departmental activities. He is at present giving considerable time to the project of a new airport for Washington which will

cover about 500 acres on the banks of the Potomac, below the city, with opportunity to enlarge to 700 acres if later required.

Dougherty personally had full charge of the arrangements in the District at the time of the inauguration of President Hoover. President Hoover personally expressed his appreciation of the adequate arrangements made and the splendid manner in which the inauguration was policed, and expressed the idea that he enjoyed the inauguration better than any other he had ever attended.

Harry Worcester reported meeting Jimmy Baker in the Grand Central Station in New York about a month ago, where Baker was waiting for his daughter. Worcester found him in the best of health and spirits.

We are all delighted to hear that Oswald Hering was married to Mrs. Marguerite Bennett Cobb of New York on March 15. The marriage took place at the home of the bride's sister, Mrs. Charles Crocker, 941 Park Avenue, New York, after which the bridal couple took a trip to South America. We all wish to extend to both Mr. and Mrs. Hering our best wishes for a long and happy married life.

Hering is a member of the American Institute of Architects, the Society of Beaux Arts Architects, the Architectural League of New York, the Society of Colonial Wars, the Sons of the Revolution, the Society of the War of 1812, the Veteran Corps of Artillery and Company K, Seventh Regiment, New York Guard. He is chairman of the committee of architecture of the Interfraternity Conference and has just completed a book entitled "The College Fraternity House." He is a member of the Delta Kappa Epsilon fraternity and is editor of the *Delta Kappa Epsilon Quarterly*. Hering has written a number of books on architectural subjects, among them being "Concrete and Stucco Houses" and "Economy in Home Building." He is, by the way, a lineal descendant of Roger Williams and of Anne Bradstreet, America's first poetess.

Irenée du Pont, with several relatives and friends, has purchased a large tract of land including several miles of beaches east of Veradero Beach which itself is seventy miles from Havana, Cuba. It is his intention to develop this property into a private winter resort for himself and his associates, and it will have its own port of entry, yacht club, and casino.

We learn that Harrison Smith, former Professor of Mathematics at the Institute, is now located at his plantation at Papeari on Tahiti. Smith perhaps considered that we are getting to be too highly civilized, so betook himself to the South Sea Islands. — JOHN A. COLLINS, JR., *Secretary*, 20 Quincy Street, Lawrence, Mass. CHARLES W. BRADLEE, *Acting Secretary*, 261 Franklin Street, Boston, Mass.

1899

Some people think of the Secretary once in a while, and early in May a member of the Class went through Washing-

1899 Continued

ton and called on the Secretary. It was Mathilda Frazer and she told me that she is resigning this year, from her practically continuous service since graduation at the Girls' Latin School in Boston, and that she is going to live at Orlando, Fla., where she has built a Spanish type of house.

George Lynch writes from Los Angeles that he cannot come to the Reunion because his daughter is graduating from the University of California in Los Angeles on June 15. However, he may come east later in the summer and then he will call upon me. This is something to look forward to.

From the newspapers I gleaned the facts about Herman Smith's appointment as chief engineer of the Board of Estimate of the City of New York. He had acted in that capacity since November 8, following the retirement of Arthur S. Tuttle. Mr. Tuttle resigned to take the post of consulting engineer to the Board. Smith previously served as deputy chief engineer under Mr. Tuttle, following ten years of service as chief engineer of the Bureau of Highways of Brooklyn.

When former Secretary of Commerce William C. Redfield was Commissioner of Public Works in Brooklyn in 1903, he appointed Smith to an engineering position in the Brooklyn Bureau of Highways. Smith had at that time served the engineering department of the Long Island Railroad for five years, after graduation from Stevens Institute Preparatory School and the Massachusetts Institute of Technology. In 1906 he was placed in charge of one of the construction divisions of the borough, and in 1907 was made engineer in charge of maintenance by Borough President Bird S. Coler.

Smith is fifty-two years old and has lived in Brooklyn for twenty-two years, and also is a member of the Brooklyn Lodge of Elks, the Arkwright Club of New York, and the Rockville Country Club. For several years he was chairman of different standard paving specification committees of the American Society for Municipal Improvements, and did work in pavement standardization in the United States and Canada. He is the author of many articles on highway work and has had experience in zoning, city planning, traffic, and general municipal problems.

It is with regret that I must record the death of Lane Johnson, chief engineer of the United Engineering and Foundry Company at Pittsburgh, Penna., at his home at Ingram on March 2. He had a wide and varied steel plant experience before he joined the United Company, having served as mechanical engineer for the American Rolling Mill Company, Middletown, Ohio; chief engineer of the Kokomo Steel and Wire Company, Kokomo, Ind.; and mechanical engineer of the Colorado Fuel and Iron Company, Pueblo, Colo.

From the Boston *Herald* for May 21 comes the following interview: "It took Philip Stockton three years of hard work at M. I. T., after four at Harvard, to become a civil engineer. It took the engi-

neer just three more to become a bank president. In 1902, at the age of twenty-eight, he was made President of the newly founded City Trust Company. For the past nineteen years he has been President of the Old Colony Trust Company and still remains among the youngest bank presidents in the city.

"He is ruddy of cheek and jovial of humor. . . . And yet, in spite of his merriness, Mr. Stockton is abrupt and almost brusque in manner. He is an easy man to see, but a hard man to see for long unless you have something very worth while to say. He can dismiss idle callers with a good-natured dispatch that wastes no time and hurts no feelings.

"For the benefit of his interviewer, he made a rapid enumeration of his recreational interests in the following order: trout fishing, quail shooting, court tennis, lawn tennis, and trap shooting. He fishes with a fly, and spoke a little scornfully of any man, high or low, who would use a worm. He is also a little scornful of golf, although he has played. As an angler, Mr. Stockton does not indulge frequently in long fishing trips with professional guides and other expensive aids to the city sportsman. Rather, he is apt to make a day's outing from Boston to the Cape, or from his summer home at Westport to the fishing streams of the Adirondacks. . . .

"Among his working interests is an unflinching interest in, and fondness for, young people. He likes to talk with them and he understands their point of view. He serves the younger generation as an overseer of Harvard University, Treasurer of the Winsor School for Girls and Treasurer of the Infants' Hospital. He follows the academic and athletic welfare of Harvard with close attention. . . .

"He belongs to more clubs than almost any man in Boston. They include the Country Club, the Eastern Yacht Club, the Athletic Club, the Somerset Club, the Tennis and Racquet Club, the Myopia Hunt Club, the New Riding Club, the Chilton Club, the University Club, the Harvard Club, and the Racquet and Tennis Club of New York.

"With two or three exceptions he is a director or trustee of more institutions than any Bostonian. They number forty-four, according to the Directory of Directors, and include, besides the Old Colony Trust, the General Electric Company, the American Tel. and Tel. Co., the Gillette Safety Razor Company, and the Campbell Soup Company." — W. M. CORSE, *Secretary*, 810 18th Street, Washington, D. C. ARTHUR H. BROWN, *Assistant Secretary*, 53 State Street, Boston, Mass.

1900

Allen writes as follows: "In January I made another business trip to Italy, the fifth in three and one-half years. Northern Italy is hardly to be considered as a vacation resort at that time of the year unless one goes in for winter sports. I found plenty of snow and colder weather than they were having at home. However, it was all very enjoyable and I had some

delightful trips into the Val d'Aosta and the valleys leading into the Alps, getting up to about 6,000 feet elevation.

"Passing through Paris on my return I called on George Gibbs. Never having heard him preach before, I attended his vesper service and was rewarded by hearing a very excellent sermon. After the service we spent the evening together. George seems very happy and contented in Paris. The Class of '00 is again to be congratulated on the success of one of its members. When I left Paris I spent a week in Ireland before returning home. Again the cold and snow prevented my turning a business trip into a real vacation, but in spite of the wintry aspect, Ireland was interesting to see. We covered a large part of the southern part of the Free State including the Lakes of Killarney and Blarney Castle."

We all remember Cayvan in Course V. Leo writes to Robinson of the Class of '02 periodically and two of his latest have been sent in for our benefit. He is living in Grand Rapids and seems to be enjoying life. His chief lament is the dearth of news of his beloved classmates through the column and he suggests that all living members send in a word or two so that the far away fellows may keep track. Leo is superintendent of the plant of the Hekman Biscuit Company, also part owner of the Dutch Tea Rusk Company in Holland, Mich., so with his music he is a pretty busy fellow. — C. BURTON COTTING, *Secretary*, 111 Devonshire Street, Boston, Mass.

1901

Through several kindly friends a number of items of general interest to the Class have reached me recently.

Early in February Frederick G. Clapp started on a long trip for professional purposes through southern France and Italy, thence to Egypt, making a voyage in a small boat down the Red Sea with return to Suez. [See article in front section. — *The Editors*.]

Loring Danforth has just been elected President of the Buffalo Athletic Club. We have all known of his prowess in golf; some of us remember his competency as a tennis player; and from time to time rumor has identified him with various other forms of sport. Dan is now seemingly turning his attention to indoor activities. Participants in the Thirtieth Reunion will predict for him a brilliant future in his latest field of endeavor.

Dennie Haley, now of Joplin, Mo., has returned to his home after a visit to Custer County, Idaho, where he made an examination of the properties of the Livingstone Mines Corporation. I hope they are good, since that may insure us a visit from Dennie at the time of the Thirtieth Reunion which draws on apace.

One piece of news has just reached me. It brings a sob of thankfulness to my aged throat and a tear of gladness to my dimming eye. After years of patient struggle, undaunted by adversity, rising triumphant over defeat, and maintaining ever an elephantine optimism, Matt Brush has at last won recognition. Word

1901 Continued

reaches me that he has been elected a director of the Vanadium Corporation of America and will at last join the favored group who, from time to time, garner the traditional gold piece.

Frank Chase, after a varied and romantic career at Technology, some time ago became Frank E. Chase, Inc., which, for the benefit of the uninformed, I may say does not imply a modification of physical habitus. Incorporated advises us that Frank is to build two foundries, one in Leningrad, the other in Stalingrad, which together will have a capacity capable of the construction of two hundred tractors a day. The output of the factory is to be applied to the solution of certain of the Soviet's industrial problems arising from the gradual disappearance of the working class from Russia. The item states conservatively that the expenditure will be about four million dollars but says nothing concerning the cost. Frank also is about to erect a plant near Moscow for the manufacture of sewing machines. The uses to which these will be put has not yet been disclosed. It is safe to say, however, that the Moscow Art Theatre and the *ci-devant* Imperial Ballet are not interested. All these enterprises are to be erected under contracts with the Soviet government, and the Supreme Council of National Economy of the United States of Soviet Republics has invited Frank to visit Russia next September. A movement is on foot to raise a fund to assist Frank to accept the bounteous hospitality so graciously offered. It will probably not mean permanent financial embarrassment.

Charlie Whittemore is to continue as a lecturer in the Harvard School of Architecture on the mechanical plans of buildings, we learn from a clipping from one of the Boston papers recently. Unversed in the technique of this profession I have been unable to explain the appearance of many of the recent structures which have appeared locally. The word "mechanical" explains it all. One can only hope that Charlie speaks as a destructive critic. Evidently the curse of quantity production is assailing fine arts.

Nat Patch, whose parents also placed a "K" and a "B" in his identification record, has just been elected Vice-President of the American Foundryman's Association. This is a national organization made up of practical men in the foundry business and is one of the country's large and active trade associations. Offices seem to be raining upon our fortunate class member whose home is in Buffalo. Nat has also had other recognitions of his competency and in addition to membership in a number of technical and scientific organizations has been for the last eight years chairman of a committee on cast non-ferrous metals of the American Society for Testing Materials and their representative to the United States Bureau of Standards. Nat is also a Past President of the American Brass Founders Association. He now plans to join the Athletic Club as the presidency of his classmate promises certain advantages.

Henry Chambers writes in at the close of a cruise through the West Indies and the Canal Zone to send greetings and an earnest of active participation in the affairs of Technology. Chambers has just moved to the Grand Central Terminal from his earlier place of business on Lexington Avenue.

The ever faithful Philip Wyatt Moore writes the following concerning Charlie Rockwood whom some of us remember tenderly as the sole user of pigtail twist in the Class: "An ex-'01 man named Charles Rockwood, whom I remember as a freshman and whom you probably will also remember, has shown great interest in the affairs of the Institute in this district recently, which is most gratifying. With Maltby, the President of the Technology Club here, Rockwood flew to the recent meeting of the Associated Clubs in Pittsburgh, and I have learned from him that his plane from Chicago was the only one that arrived in Pittsburgh on the day set for the arrival, all of which is a great credit to Rockwood's energy and interest."

This is the last letter that I shall send to you through the columns of The Review until next fall. I take this occasion, therefore, to trust that you will all have a pleasant and prosperous summer which will place you in an attitude of true benevolence when my annual class report comes to your desk. — ALLAN W. ROWE, Secretary, 4 Newbury Street, Boston, Mass. V. FRANK HOLMES, Assistant Secretary, 250 Stuart Street, Boston, Mass.

1902

The New York section of the Class staged a week-end at Atlantic City from April 5 to 7, with headquarters at Had-don Hall. Those present were: President and Mrs. Clyde Place; Vice-President and Mrs. Monte; Mr. and Mrs. Mathesius; Mr. and Mrs. Hathaway; Mr. and Mrs. Steve Gardner; and Mr. and Mrs. Annett with their children, Cecil, Jr., and Merthe. Place entertained the golfers on the links of the Seaview Club where Steve proceeded to show that, having come the furthest, he could play the best game, and felt that he had quite squared up accounts with the Class President for the trimming the latter handed him at Lyme last June. In a foursome, however, Annett and Place teamed up to beat Gardner and Monte, and Bert Hathaway trimmed Mathesius in a private match. The ladies spent an enjoyable time on the board walk and taking in the other attractions of Atlantic City. The weather was most favorable for a pleasant week-end at this well-known resort.

Lou Cates was recently chosen President of the National Copper Bank of Salt Lake. This bank has become a member of the First Securities Corporation which controls twenty-five of the largest banking institutions in the Rocky Mountain States, and Lou is one of the directors of this corporation.

Charlie Tolman lectured recently on business management to the senior students in Course XV (Engineering Administration) at the Institute. — We

have direct information that Harry Pond is now located in Rio. We hope to get confirmation and a definite address soon. This is not the first time that Pond has "snuck" way off somewhere without letting us know. Harry is a deservedly popular member of the Class, his only failing being his tremendous reticence. — Robbie has severed his connections with the National Fire Insurance Company of Hartford to become manager of the Insurance Department of McKesson and Robbins, the big drug manufacturers at Bridgeport. His residence address is 307 Old Post Road, Fairfield, Conn.

While these notes will not reach the readers of The Review till after the annual outing of the Class, June 14 to 16, they have to be sent in too early to permit inclusion of a report of that occasion, and the palpitating public will have to wait for the November number for particulars unless they see fit to write to the Class Secretary. — FREDERICK H. HUNTER, Secretary, Box 11, West Roxbury, Mass. BURTON G. PHILBRICK, Assistant Secretary, 246 Stuart Street, Boston, Mass.

1903

Jim Doran writes that Schmidt made him a visit in Danbury this winter. Schmidt is in charge of the New Jersey Zinc Mine at Hanover, New Mexico. In addition to his engineering duties, he has complete care in every way of about a hundred men and their families. Jim writes that he had a satisfactory year in 1928, no sheriffs made social calls at the factory, and he is putting one son through Georgetown, with a daughter and two other sons coming along.

We regret to have to announce the death of Win Robertson on February 18, 1929, on board the S. S. *President Johnson* at Los Angeles. Robbie and his wife were on a tour to Hawaii, having sailed from New York through the Canal, and while entering Los Angeles he was stricken suddenly, and died two hours after docking. Following graduation he went into the paper manufacturing business in Hinsdale, N. H., in which he stayed all his life. He was a director of the Vermont Peoples National Bank of Brattleboro, Vt., and of the New Hampshire Manufacturers Association. He was a member of many Masonic orders, the Engineers Club of Boston and New York, the Technical and West End Clubs of New York, the Brattleboro Country Club, the Whitney Cove Club of Woodlands, Maine, and the Wantastiquit Trout Club. He leaves a wife and two children, Edwin W. and Irene S. Robertson.

Only five of the Class reported at the Annual Alumni Dinner. Foster came down from Lowell, Low up from Brockton, Joyce in from Leominster, and the Secretaries, Eustis and Cushman were there. We had a pleasant evening, and all expressed regret that more of the Class were not there.

Notices in regard to the annual reunion will be sent to the Class soon. — Whitcomb is leaving the United States Rubber Company to be with the Henry L. Scott Company in Providence, R. I.

1903 Continued

Potter appears prominently in connection with the A. S. M. E. in the April 22 issue of the A. S. M. E. *News*. We learn that after graduation he received his degree of Doctor of Engineering from the Kansas State Agricultural College in 1925. He served on the faculty of that college from 1913 to 1920, and as Dean of Engineering and Director of the Experimental Station of the college. Since 1920 he has been Dean of Purdue, and has had an active part in the American Railway Association air heater and draft gear tests. As a member of the board of management, he helped to carry on the work of the Fourth Midwest Power Engineering Conference at Chicago, last February. His picture also appeared in the *News*. — FREDERIC A. EUSTIS, *Secretary*, 131 State Street, Boston, Mass. JAMES A. CUSHMAN, *Assistant Secretary*, 35 Harvard Street, Worcester, Mass.

1905

Here is something worth reading, an excellent model for our other travelers to follow when they get home. You are indebted to Frank Payne who writes: "My trip to Japan was 100 per cent: fine weather, interesting crowd on the boat, and a successful trip in every way. At San Pedro, Bob Gardner came aboard heavily laden with some South Seas soothing syrup. Bob is a dead ringer for Cappy Ricks; just a fringe left of that wonderful black hair, but that appeal to the ladies quite intensified. At least, Mrs. Payne fell for him like a ton of bricks.

"You ought to get Bob to describe his trip to the South Seas in his tug, where he went to salvage the *Steel Navigator* which was on the rocks. Bob said he had to strap himself into a chair during the day to keep from being pitched overboard when the old craft rolled and pitched. Those are not just the terms of an old salt, but the description of the trip given me by Bob leads me to believe that very few of us have had such an experience. This is certain, however, that Bob brought back the bacon for his firm and has apparently kept quite a slice of it, after looking over his lovely home, private yacht, and fleet of automobiles.

"Hardly had we been out a couple of days before it was apparent to me that Technology was exceedingly well represented among the passengers. There was Fred Dillon '93, from Fitchburg; George Gilmore '90, from Lexington; Jim Rollins '78, from Milton; and Charles Boss '94 from Boston. It was hard work for me to keep up with these fellows when it came to playing golf and surf-board riding at Honolulu. They were just the finest bunch that I have ever met and a great honor to the Institute.

"While at Honolulu the local Technology tycoons gave us a wonderful banquet from soup to nuts — all Hawaiian products. We had papai melons; poi, which is a paste they use for paper hanging (the Hawaiians get fat on this and it is good for ulcers of the stomach as well as its other uses); young pig; fresh pineapples; and a special Hawaiian ginger ale known to Americans as Oke. Sid

Carr '06, Furer '05, and the rest of the fine bunch of Technology men will be 'completely busted' if they put on such a wonderful dinner and entertainment whenever Technology shows up on the island.

"Leaving Honolulu, the eleven days to Japan were perfect; except, possibly, the last two where we ran into cold weather, such as you have in Boston in March. Entering Yokohama, we could see old Fugi a hundred miles in the distance, all white. But the natives were shivering quite as much as our party, and we decided to take a night train to Kobe and meet the S. S. *McKinley* and go on to China and the Philippines.

"Ten of us piled into the crack express, or *de luxe* train, that night. On account of several women in our party traveling singly being forced to share their compartment with some Japanese, I was picked out to suffer, and our compartment was used by the girls. The heat in this small compartment, where the Japanese traveling salesmen were snoring and enjoying themselves was stifling. At this time of the year the night trains are the only place where heat can be found in Japan, and they certainly take advantage of it. I reached for the ventilator at the top of the compartment and gave it a pull, occupying as I was the top berth, and the whole window frame came out, resulting in plenty of fresh air for the moment. At the top of the mountains, about two o'clock in the morning, there was plenty of fun. The blanket in these Pullman trains is about an inch and a half thick, just like a mattress. This was not any too warm for me, but my traveling companions made it plenty warm enough! I arose early and completed my toilet in order that I might continue the journey with a whole skin.

"Kyoto, the temple city of Japan, was beautiful, even though it was very cold and the cherry blossoms were not in evidence. The old lacquer industry in this city is most interesting. Some of the Japanese lacquers are made from the blood of coolies in order to get that brilliant red, and 132 applications are sometimes made before the finished product is delivered. Some of these artists work on one piece five or six years, and their factories are more like private homes in appearance than the type of factory we are accustomed to here in the States." This is the first of a series of travelogues by Frank E. Payne. The next will appear in an early number.

Your Secretary was in New York on March 26 for the annual get-together of the Technology Club of New York at the Waldorf. If anybody else doesn't know, let us state that an informal get-together means formal clothes. Bennett, Harry and Mrs. Charlesworth, Fouhy, Gilbert, Bill and Mrs. Motter, Percival, and Spalding were also there. Charlesworth stood in the receiving line, perhaps because the performers were secured through his agency. Some of us were at a table with '04 and some with '06. There were no speeches. Three classes tried yells, everybody sang one verse of "Take Me Back to

Tech," and a vitaphone record pushed the Stein Song through the fourteen foot horn while most of us la-la-la'd. It was all rather "scrambled."

Hallet R. Robbins's present address is Oriental Consolidated Mining Company, Hokuchin, Chosen (Korea). He is consultant metallurgist for that firm. — Phil Hinkley took enough time off in February to get way down to Barbados, B. W. I., and presumably back again. — During 1928 the Shipping Board saved \$972,000 in fuel due to the training of personnel and the application of engineering principles under the direction of R. D. Gatewood. — One day Arthur Lord met your Secretary in the Metropolitan Museum of Art, a funny place for two business men to meet. — Bill Spalding is located at the factory of the American Cyanamid Company, down on the Jersey marshes near Perth Amboy. He lives in Westfield, N. J. Bill reports that Ralph Gifford is at the same plant. — Grafton Perkins is now advertising manager of Lever Brothers Company in Cambridge, manufacturers of Lux, Lifebuoy, and other soaps.

Roy Allen is late in reporting, but here he is. "The above address (R. F. D. No. 4, Freehold, N. J.) is due to the fact that the farm bug bit me severely just a year ago, so now I am qualifying as the world's worst farmer — by proxy. I have 150 acres, of which 100 plus are in crops. I haven't as many apple trees as Grove Marcy or Bob Lord, but I'll bet I have more potatoes. If last year's results are a criterion, I shall have to continue to work to support the farm, but as the latter is a good one, it may be that the tables will be turned some day. I am still looking after construction work for the Closson-Parkhurst Engineering Corporation of New York, but hope to get down and dig in the dirt for at least a part of this summer."

Fred Goldthwaite, New England manager for the Duro Pump Company, has taken on the Piatt oil-burning water heater and the Universal oil-burning room and garage heater. He says that his business is growing and that "1929 is going to be the best year ever." — Sam Shapira, mining engineer of Boston, who gave us, some months ago, an interesting account of his Russian experiences, has returned to Russia to renew his engagement by Stuart, James and Cooke, technical advisers to the Soviet Government. His work will be principally on coal and iron. — Logan Hill, lately assistant to the President of Colonial Airways, Inc., is now Vice-President and member of the technical advisory board of the Atlantic Coast Airways Corporation at 551 Fifth Avenue, New York.

Word comes from Alden Merrill in Buffalo: "I am still with the American Brass Company. I was sorry to have Bill Spalding leave Buffalo. He lived on the same street with me here. In summer I play some of the worst golf shown at the Park Club, Buffalo, but have some enjoyment, even so, maybe even as much as Carl Houck. Carl is really pretty good."

1905 Continued

One whose name will not be mentioned asked why there had been no class assessments lately. Let him wait. — Jason L. Merrill, whom we missed at the University of Maine, is with the Valley Paper Company in Holyoke, Mass. — Leslie Clough's older boy was graduated from Bates College in 1928. — Does anybody know where Ernest Harrah can be located? — Toots Dissel says he keeps close to Everett where he works and Winchester where he sleeps, but occasionally he lunches with Grove Marcy at the Chamber of Commerce. — Henry Russell has left Atlanta. Senior Prince thought he was with the General Electric or Western Electric at Seattle or Spokane, but we know better now. But that's all we do know. — Carl Graesser has returned from a trip to Europe.

Two more volumes of the International Critical Tables, Dr. E. W. Washburn, editor-in-chief, were published in 1928. Volume III covered density, thermal expansion, compressibility, vapor pressures, boiling points, adsorption, gas solubilities, and mutual solubilities of liquids. Volume IV covered triple points, transition points, freezing points, solubilities, phase relations for condensed systems, osmotic pressure, surface tension, and properties of surfaces, and the index covering the first four volumes.

Now that Wesleyan has acquired the original Einstein "*Zur Eintheilichen Feldtheorie*" which your Secretary has carefully examined, Al Smith is excused from further study. — Frank Carhart says that "Bob Folsom was in the hospital for some time last year, and it may be that his food requirements are somewhat different from what he can get at the weekly Technology luncheon," as a possible explanation of his nonattendance. — Sid Strickland reports a class dinner and bowling party on the night of the Institute Open House. Those present were: Buff, Crowell, Damon, Fuller, Goldthwaite, Kenway, Johnson, and Strickland. Special notices were sent out, Messrs. Crowell and Fuller, and you see the response. — George Jones wrote in April that Bill Green "unexpectedly walked in and told me about his exhibit at the toy fair here. Also, Gage came in a few days ago." — At the New York get-together your Secretary found the young fellow who sang "Take Me Back to Tech" at the yachtsmen's dinner at Bermuda last summer.

Wallace MacBriar, who is busy keeping cows contented, out in Seattle, writes: "My family is the same as it was four years ago: two boys and two girls. The older girl, Pat, is planning on going to Smith this fall. My older boy, Joseph, who is next in line, is planning on going to the University of Washington this fall with the idea of spending a year or two there, then possibly going to Technology to finish his course. I am still with the Carnation Company and in hopes I will be for some time to come. Carnation Milk Company here on the Coast has recently gone into the fresh milk and ice cream business. Heretofore their operations have largely been confined to the

evaporated milk industry. To handle and operate the fresh milk and ice cream interests of the company here on the Coast, a new corporation has been organized, known as the Carnation Farm Products Company, which is a holding and operating company for the fresh milk and ice cream end of the business. Your humble servant happens to be a Vice-President of these companies." Quite appropriate that Mac's thesis should have been "The Determination and Elimination of Moisture in the . . ."

Theo Moorehead is managing partner of the San Francisco office of H. L. Stevens and Company, an organization of architects and engineers specializing in the design and construction of hotel buildings. His territory covers eleven states. He is now building two hotels in the Pacific Northwest and one in Nevada. Ned Jewett is the eastern representative of the same outfit with offices in New York.

Here is the first news in years from Breck Cabell, from the Cabell Electric Company in Jackson, Miss.: "My business these days is the operation of a wholesale electrical supply house, representing both the General Electric and Westinghouse interests. With the exception of running across George Rhodes at Monroe, La., while he was superintending some work for Ford, Bacon and Davis, at the gas fields of Sterlington, La., the above has been my complete contact with the Class of '05. I haven't been back to Boston since graduation, although I do get as far east as New York sometimes."

Albert Gilbert admits that he has not one but two apple orchards at West Newbury, Mass. "There are between 6,500 and 7,000 trees in all. (Can you match that, Grove? How about you, Bob?) Some of the rows are over a mile long, and together the two orchards of 110 acres extend from the Haverhill-Newburyport road down to the Merrimac River, starting nearly opposite the Town Hall in West Newbury. When the trees are in bloom, about May 20, they are a 'sight to see.' Skipper Coffin of Newburyport can swear that part of it is true."

One year from now we shall be having our Twenty-Fifth Reunion. "Are we downhearted?" — ROSWELL DAVIS, Secretary, Wes Station, Middletown, Conn. SIDNEY T. STRICKLAND, Assistant Secretary, 20 Newbury Street, Boston, Mass.

1907

Word was received from Mrs. Agnes C. Bowen in March telling of the death of Clarence on December 15, 1928. The Secretary wrote her a note expressing the sympathy of himself and the Class and suggested that a letter from her telling of our classmate's career would be of interest to all of you. In response to this we received a long letter on May 14, 1929, from which the following facts are taken: Clarence, a graduate in Course II, was with the Associated Factory Mutual Fire Insurance Company from 1907 to 1910, from which time until December, 1926, he was associate engineer with the firm of

John A. Stevens, consulting engineers of Lowell, Mass. From January, 1926, until December 15, 1928, the date of his death, he was plant engineer for the American Hide and Leather Company, which has plants in four or five states, and he traveled from one to the other, doing the consulting engineering work. He had his office at Lowell, Mass., and lived at 14 Rutland Street in that city. Beginning last August an appraisal of all the properties of the company was made, and although Clarence was due to have his vacation, he stuck by his work, giving of himself on nights and week-ends as well as during regular working days, sacrificing all vacation, and becoming thoroughly tired. On December 11 he went to Boston to attend a conference. The next day he awoke with a temperature of 105½°, and in spite of the care of nurses and doctors, his resistance to the attack of influenza was too low and after intense suffering, he died on December 15. Clarence leaves his widow and three children, two girls, four and eight years old, and a boy, Alanson (by his first marriage), aged eighteen. Alanson intends to enter Technology in September, 1929. Clarence was a member of Kilwinning Lodge, A. F. and A. M., and was a 32d Degree Mason; also a member of the Men's Club of Grace Universalist Church, Lowell; and of the American Society of Mechanical Engineers.

The following is taken from the Boston *Evening Transcript* of April 11, 1929: "News has just been received here of the death of George Sidney Sedgwick Playfair, who had many relatives and friends in this country, and who passed away after a short illness at Gravesend, Kent, England, on March 28, 1929.

"He was the only son of Lyon McD. Playfair and Emilia S. Playfair, and was born in Australia in 1882. His father was a nephew of Sir Lyon Playfair, who was well known in Boston, for he married a daughter of the late Samuel Russell. His mother was the second daughter of Major William Dwight Sedgwick, of Lenox, who was mortally wounded in the battle of Antietam.

"His parents having made only a short stay in Australia, he was educated partly in France, partly in England, and finally at the Massachusetts Institute of Technology. On leaving the Institute in 1911, he became associated with Harrington Emerson, the noted efficiency expert. At this time he was asked to become an American citizen but preferred to remain a Britisher. Soon after this he was invited to join some Playfair cousins, who had settled in Winnipeg, Canada, and there he established a real estate business, and was living in that place when the great war broke out.

"He volunteered in August, 1914, for service with the Canadian Expeditionary Forces, and after some training in the Province of Quebec, he went to England, and was in quarters on Salisbury Plain until the Force was sent to France. He then saw service at the front, where he was severely wounded, subsequently losing one eye as a result. Upon dismissal

from the army he went to live in London, and obtained employment with the Government, in the Division of Taxation, and remained there until his death." Playfair was associated with the Class of '07 for only one year during our undergraduate days.

Once again we have a letter from Frank MacGregor under the date of May 17, written on the stationery of the Hotel Commodore in New York, saying that he had just been having lunch with Bob Keyes. He continues: "The other morning at breakfast here I found Charlie Allen and we agreed to meet a little later in the lobby. When I got there he was talking with Bob Albro, and it seemed quite a coincidence that the three of us should be under the same roof and no one of us knew that the others were there. . . . Petie Baker spent the last week-end with me christening my new cruiser, the *Sandemac*, down on Chesapeake Bay. Please pick a seaport for our next reunion, as I can sleep six comfortably and might collect some '07 passengers from down this way."

From the Boston *Herald* of April 12, is taken the following: "There is local interest in the announcement coming from Santa Barbara of the engagement of Miss Barbara Baker, daughter of Mr. Elbert L. Baker of Mission Canyon, to Winsor Soule, son of Mrs. Richard Soule, formerly of Brookline. . . . Mr. Soule was graduated from Harvard College with the Class of '06 and studied architecture at the Massachusetts Institute of Technology. He is the head of an architectural firm in Santa Barbara, where the wedding will take place early next month."

Winsor's business address is 116 East Sola Street, Santa Barbara. He has been married twice before, having divorced his first wife, and lost his second by death on September 26, 1927. — Carl J. Trauerman, President of the Butte Radio Club, was appointed state business manager and publicity director for the Atwater Kent Company to handle the Montana audition contest for entries to the regional singing contest at San Francisco in November, 1928. Trauerman is Secretary of the Montana Society of the M. I. T.

Albert E. Wiggin, general superintendent of the Great Falls plant of the Anaconda Copper Mining Company, has been made general manager of the metallurgical activities of the company in Montana, with headquarters at Great Falls. Mr. Wiggin was born at Wakefield, Mass., where he attended the grade and high schools, graduating in the course of mining engineering and metallurgy from the Institute with the Class of '07. He then entered the employ of the Anaconda Company at Great Falls, being transferred to the Washoe plant at Anaconda in 1911, where, under the supervision of Frederick Laist, he was instrumental in designing and placing new equipment to increase copper extraction, especially from the slimes. . . . In 1918 he was made superintendent of the Great Falls plant. Mr. Wiggin is prominent in civic affairs and is a director of the First National Bank of Great Falls, the largest

bank in the northern part of the state. — BRYANT NICHOLS, *Secretary*, 2 Rowe Street, Auburndale, Mass. HAROLD S. WILSON, *Assistant Secretary*, Int. Shoe Company, Manchester, N. H.

1909

At the time these Class Notes are being written the Twentieth Reunion is but a month away. Jim Finnie and his committee have been working hard to make it a success, and there is every indication that it is going over big. A complete account of the Reunion will appear in the first fall issue of *The Review*, as it is not possible to have it printed in the July number.

All the Class will be pleased to learn that Mollie Scharff has just been elected a term member of the Corporation to serve for five years. — Brad Dewey has been elected as a member of the Executive Committee of the Alumni Association. Brad writes that he is obliged to leave Boston about the middle of May for a trip to Europe and probably will not return in time for the Reunion.

George Gadsby, who was formerly President and General Manager of the West Penn Power Company, has recently been elected President and General Manager of the Utah Power and Light Company, having its main office in Salt Lake City. Gadsby has been connected with public utilities for about twenty years, becoming associated soon after graduation with the Warren Water Company. Later he was with the American Water Works and Electric Company in New York City, going with the West Penn Power Company in 1918 as assistant to the President. He became Vice-President a year or two later and finally President and General Manager of the company.

At the third national aeronautic meeting of the American Society of Mechanical Engineers held in St. Louis last May, E. F. Luening read a paper on "Production and Use of Helium Gas." Luening is Vice-President of the Kentucky Oxygen-Hydrogen Company.

Tom Desmond was planning to attend the Reunion, but he now finds that he will not return from a South American trip until about July 1. Tom and his wife expect to visit Ecuador, Peru, Bolivia, Chili, Argentina, and Brazil. He writes that he is very sorry to miss the Reunion and sends his best regards to all.

Fred J. Doherty has become "Brother Daniel" in religious work and is now teaching chemistry and physics at Maryknoll College, Clark's Summit, Penna. — C. N. Harrub is in business for himself, as head of the firm of C. N. Harrub Engineering Company, Nashville, Tenn. — From Houston, Texas, Arthur E. Hartwell writes that he would like to attend the Reunion, but finds that it is not possible for him to do so. He is President of the Hartwell Iron Works and has a family consisting of three boys and two girls, ranging in age from approximately seventeen years to two years.

Robert Hulsizer is located in New York City as a patent attorney. He is living in Greenwich Village and has two children, a boy and a girl. — CHARLES R. MAIN,

Secretary, 201 Devonshire Street, Boston, Mass. PAUL M. WISWALL, *Assistant Secretary*, The Postum Company, 250 Park Avenue, New York, N. Y.

1910

The following letter is from Dan Williamson: "With every issue of *The Review* I always turn to the News from the Classes and the chances are about even that I draw a disappointing blank so far as the '10 Notes are concerned. And then I wonder what kick I can have, for it has been a long time, I know, since I have sent in anything about myself — so I am going to try now to get partially square with the board.

"Time does strange things to some of us. I would never have imagined ten years ago when I was busy in mechanical and electrical engineering in Detroit, in power plant construction for the Detroit Edison Company, and later with electric brass melting furnaces for the Detroit Electric Furnace Company, that I would today be manufacturing odorless liquid glues and pastes in Chicago! Such, however, are the facts.

"I had got into sales engineering work that called for constant traveling which I dislike very much, and I came to the conclusion that such traveling should be done by fellows who like it and I was distinctly not one of those. Then, four years ago, my uncle in Chicago was suddenly killed, leaving this business — a small manufacturing establishment making odorless industrial glues and pastes — and I rather suddenly decided to move to Chicago and carry on the business, although then I did not know a barrel of glue from a bale of hay.

"However, I wondered then if there was much difference between the problems involved in melting brass and those in manufacturing adhesives — and I do not now think there is. They each require the same scientific line of attack.

"Our products are odorless, used without heat, and they are used in very many industries, the largest single field, perhaps, being the package industry. The innumerable packages in which all manner of products, particularly food products, are put up, are all sealed with adhesives of the type that we manufacture. The packaging is done on fast, automatic machines and innumerable problems are constantly coming up with new types of wrapping materials on machine operation as with waxed glassine paper and du Pont transparent cellophane.

"While packaging and labeling are the operations that take much of our output, our products also serve other widely divergent fields such as mosaic tile where our glue is used for the paper backing of the tile and for insulated wire where an odorless glue is used to prevent the woven outer fabric from slipping on the inner rubber insulation. Don Stevens '11 in the firm of the Okonite-Collendar Cable Company is now using one of our glues for this latter purpose on some of their wire.

"I have joined the Rotary Club of Chicago and find three or four other

1910 Continued

Technology fellows are members, but no others from '10. We receive the bulletins from the Department of Commerce in Washington that Gorton James gets out and it was a real surprise when I first saw his familiar signature on a circular letter that was sent to us. I saw Phil Hart for a few precious hours last summer. He was here on business and then went on east to see the new Institute buildings for the first time.

"I hope any of our classmates coming through Chicago will get in touch with me at Roosevelt 4201 or at night at La Grange 1125. I surely would like to see any of them. I live in La Grange, thirteen miles southwest of Chicago on the Burlington Railroad, have three children, the youngest a boy of eight and two girls, the oldest being in the first year of high school." — DUDLEY CLAPP, *Secretary*, 16 Martin Street, Cambridge, Mass.

1911

In the middle of May the Lamson Company sales manager transferred your Secretary indefinitely to the Metropolitan District office and, although the family is remaining in Lexington until school is over for the children at the end of June, more than likely we'll then settle in the neighborhood of New York City.

Two of our hitherto bachelors have entered double harness, I am informed, and another will be there by the time these notes appear, according to present plans. On February 6 Oberlin Clark, II, and Miss Alma M. Brown were married at Valley Falls, R. I. They are now at home at 50 Leonard Road, North Weymouth. On April 15 Carl Richmond, II, and Miss Helen Reston Atkins were married in Milton, and are now at home at 287 Franklin Street, Quincy. The Boston *Evening Transcript* of May 13 informs us that Mrs. Ensign B. Pardee of New York and Lawrence, L. I., has announced the engagement of her daughter, Miss Gertrude Barton Pardee, to Frank Russell, II, who is in the real estate business in New York City. The wedding is planned for early June.

On April 27 in conjunction with the Seventh Annual Open House at Technology, we held a very successful '11 dinner at Walker Memorial. Something slipped up because there were only ten, not eleven, classmates present, but there were five sons of members present and two nephews, a total of seventeen. The classmates present were Ernest Batty, II, Oberlin Clark, II, Dennie, VI, Ned Hall, II, Jack Herlihy, II, Hal Jenks, VI, C. R. Johnson, X, Art Leary, XI, Charlie Linehan, I, and Harold Robinson, I. Each of the seven youngsters rose and told about his age, present school grade, his college hopes, and his present wished-for career.

Elsewhere in this issue you will read the story of the successful meeting of the Technology Clubs Associated at Pittsburgh early in May. Due to the impending change in my location with the Lamson Company and the attendant rush of clean-up work, I had to cancel my reservations, much to my disappoint-

ment. Bunnie Wilson, XIV, was the leader of the '11 affairs, and he writes: "The Class of '11 made no very great showing in the way of numbers, but with Dick Ranger, VIII, on from New York and Heinie Zimmerman, IX, in charge of arrangements, you can be sure that the quality was first class." Bunnie thoughtfully sent me some of the letters he received from classmates and from which some interesting information is available.

Pete White, II, had planned to go but his typical telegraphic message speaks for itself: "I'm terribly disappointed not to be at the luncheon today with Dick Ranger bringing you radio marvels. I am sorry that I can't contribute by bringing you steam." — Sam Cornell, XIII, received his letter at a place called Ceba in the southern Philippines where he was on a trip on the S. S. *Invincible* of the Shipping Board. The last year or so he has been chief engineer of this ship in the Far East run, having stuck to shipbuilding and shipping business practically since leaving Technology. He hopes soon to be able to settle down to family life with his wife at their Long Island home, and not be on sea trips so much.

A. L. Palmer, V, expressed his regrets from Columbus, Ohio, where he is in sales work for Goodyear Tire and Rubber Company. He says he has been covering a lot of territory of late in the south and west for Goodyear. — Dick Gould, XI, on account of his new connection as chief engineer of New York's first plant of their proposed sewage treatment program, was not able to attend. I have seen Dick several times recently, likewise Dick Ranger.

O. D. Powell, XI, production manager of the Robinson-Bynon Show Company at Auburn, N. Y., had hoped to be in Pittsburgh, but had to send regrets, adding: "Ralph Bierer, I, and Howard Ireland, XI, are here in Auburn with Dunn and McCarthy, another shoe factory, so that I see them frequently. I had the pleasure of seeing Ted Van Tassel, X, recently when he was here demonstrating the new sole leather product that he is pushing." — Mike Greenleaf, VI, President of Greenleaf, Inc., complete automotive electrical service, Detroit, had to send regrets, but told Bunnie that he hoped to see him soon because "much water has gone over the dam or under the bridge, or wherever it goes, since I saw you." — Royal Barton, VI, Bill Orchard, XI, and Don Stevens, II, were others who had hoped to attend from New York and its vicinity, but at the last minute had to send regrets.

You will remember in the April issue I had a résumé of a newsy letter from Zeke Williams, XI, telling of his activities as manager of overseas business for the National Cash Register Company. In it I slipped badly when I said: "Doing nearly a million dollars of foreign business." Zeke calls my attention to the mistake in a letter in which he says: "Our present overseas business is really about twenty-five million dollars, and this amount will be doubled before many years."

I saw Bart Nealey, I, recently in Hartford, Conn. He is now with the American Gas Association with headquarters in New York City. His job is to go around the country visiting plants which are large users of gas and write up the story of their accomplishments for the trade journals. He thinks it is mighty interesting. — Ted Meyer, II, is now with the Scripps Motor Company at Detroit, while Bill Warner, I, has evidently struck new oil in Texas, having moved from Cross Plains to Big Spring, Texas. — Ted Van Tassel checks what Powell says about his Auburn visit, and writes that he now has "over thirty shoe manufacturers trying Van Tan insoles and Mills Method no-filler shoes." Ted's factory, you know, is at Norwich, Conn.

Well, boys, that's all until next fall. Now that I'm over here in New York Jack Herlihy will look after the Boston get-togethers. But regardless of my location, don't fail to write to Dennie! — ORVILLE B. DENISON, *Secretary*, The Lamson Company, 9 East 37th Street, New York, N. Y. JOHN A. HERLIHY, *Assistant Secretary*, 588 Riverside Avenue, Medford, Mass.

1912

It was pretty much the same bunch as usual, congenial souls of the New York crowd, lunching together at the Technology Club one fine May day. Idle chatter of business, the stock market, golf, bootleg liquor, and other commonplace topics were discussed. N. A. Hall, Danser, Rhodes, O'Brien, Bird, Griffin, Cary, and McGrath made up the party. In walked a tall, distinguished-looking stranger. "Something familiar about that guy," some one observed. The stranger glanced around, started to seat himself with some Technology Club men at another table, then paused and came over to our table. "Isn't this a '12 crowd?" he asked. And thus J. P. Fish, VI, was welcomed to the fold!

Just back from a year in Russia, Fish had landed in New York the day before and naturally gravitated to the Technology Club. After luncheon was over your Inquiring Reporter backed his victim into an easy chair and extracted his history. After leaving the Institute, Fish put in five or six years with Stone and Webster, on design work in the Boston office, and in various field offices. Then he decided to move, and did. His next job was in India — a year of it — after which he got a job as sales manager for the International General Electric Company in Japan. There he directed the sales of the entire line of G-E products until 1928. His first year in Japan in 1923 will stand out in his memory as long as he lives, for it was that year that the historic earthquake devastated so much of the land of the Mikado.

Early in 1928 he returned to the United States, but after a short stay, he was off again. This time he went to Leningrad, the heart of Soviet Russia. For the past year he has been electrical engineer for Hugh L. Cooper and Company, American consultant on the Dnieperprostoi. (Fish

1912 Continued

can say it, and a lot of other Rosky words, too.) This word means the Dneiper undertaking or enterprise, or just job in American. It is an 800,000 h.p. hydro-electric development, planned and under construction by the Soviet Government itself, as part of a program for industrializing those sections where agriculture alone will not support the people. The American firm is engaged in a consulting capacity. The Russian engineers, according to Fish, are a pretty good lot of fellows, mostly German-trained. He may be addressed in care of Hugh L. Cooper and Company, 101 Park Avenue, New York.

Word has just been received of the marriage of Cyril B. Vaughn, II, to Miss Gladys Templeton Walker of New Haven, Conn. Our only information regarding Vaughn is that he is with the General Motors Company and is leaving shortly for South America. We hope to be able to publish further details of his trip at a later date. — Your Secretary had the pleasure of a visit with Paul Jeffers, IV, in Los Angeles recently. Jeffers is a structural engineer, but finds time to do a great deal of sailing. He states that he will be on hand for the Twentieth Reunion.

In Denver I very much enjoyed seeing Rudy Fox, II, and meeting his family. Rudy drove Mrs. Shepard and myself over Look-Out Mountain and showed us where Buffalo Bill was buried, even though at that altitude we were in the midst of a raging snowstorm. Fox is another man who says he will be on hand at the Reunion.

A small reunion was held by Lenaerts, II, Roberts, I, and your Secretary on the *Wolverine* from Boston to Detroit recently. Roberts was on his way out to close a large dry kiln order for one of the big Detroit body builders, while John and myself were on our way to attend the A. S. M. E. materials handling meeting at Detroit.

As this is the last issue until next fall, we cannot sign off without a gentle reminder to think occasionally of that Twenty-Year Reunion in 1932. — FREDERICK J. SHEPARD, JR., *Secretary*, 125 Walnut Street, Watertown, Mass. DAVID J. McGRATH, *Assistant Secretary*, 411 Maitland Avenue, West Englewood, N. J.

1913

News of the Class seems rather scarce. We have not heard from Phil Capen for ages. Business conditions are keeping Phil hustling these days. — Butsey Bryant was seen downtown the other day. He has had an unpleasant winter. His health was not of the best, and Mrs. Bryant has been seriously ill this spring. We all hope for a speedy recovery.

Howdy Rand blossomed into print the other day. The Boston papers carried a picture of Rand's store in Roslindale and an article describing the operations relating to the drilling of an artesian well. This well was being drilled through the sidewalk, or as we gather it, on city property, hence the newsy character of the operations. Let us hope that the Class will get much publicity of this kind.

Well, classmates, this is the last news before fall. Surely things will happen during the summer which will be of interest to the Class. Send to your Secretaries some word as to what, when, why. Loosen up and let the '13 Notes section grow next year with each issue of *The Review*. Yours for a pleasant and prosperous summer. — GEORGE P. CAPEN, *Secretary*, 50 Beaumont Street, Canton, Mass. ARTHUR L. TOWNSEND, *Assistant Secretary*, Room 3-435, M. I. T., Cambridge, Mass.

1914

As these notes are being written before our Reunion and will not appear until after that grand event, there is nothing that may be written up about it. Full details will appear in the first issue of *The Review* next fall. As a pre-reunion party, several of us gathered at the Engineers Club in Boston on the evening of May 11. It is needless to say that a most enjoyable evening was spent. The only out-of-town visitor was Jimmy Judge who came down from Holyoke. We had with us William Jackson, Sayre, Markham, Zimmerman, and Lt. William Murphy, all of Technology, who consider '14 as their foster Class. H. S. Wilkins, Crocker, Ahern, Fales, Adams, and Richmond made up the rest of the party.

Francis P. Gilbert — to you the class laurels! No longer may the architects boast of their families of five; they are lost in the dim distance. Gilbert, after a long silence, appears as the claimant for the class Rooseveltian honors. Four boys and three girls! Congratulations, Gilbert, we are all proud of you. Gilbert's youngest are twins, a boy and a girl, eighteen months old. When not at home admiring his family, Gilbert finds time to be senior assistant engineer for the North Jersey District Water Supply Commission.

After having given him up as one of the few remaining hopeless bachelors, we receive word that, on March 25, Walter G. Hauser became the obedient husband of Miss Grace Edna Jordan. Hauser is now located in New York City. Perhaps it was his recent move from the quiet state of Connecticut that brought inspiration to him.

Harold A. Mayer, who is located in Seattle, writes that he will be unable to make the eastern journey to attend the Reunion, but he would like to have a local reunion in Seattle with any other '14 man straying out that way. — Here is a hot tip! Buy Kerite Cable. C. L. Smith is factory manager and Sousa Brooks is on the selling staff. How is that for a speedy combination?

J. B. Reber, who is general superintendent of the Columbian Rope Company of Auburn, N. Y., took a hasty trip to Europe this spring, just to practise up on a little golf, so he says, in order to show the gang a few at reunion time. — A. C. Sherman, also, is making a short European trip this spring. Sherman is leading a party from the Appalachian Club on a trip through Germany. — Not to be outdone by the rest, Frank Somerby is going to spend the whole summer touring

England, France, and Switzerland by automobile. Frank teaches school in the winter at the Horace Mann School in New York to kill time between his summer vacations. He is an S.B., B.S., M.A., and all that sort of thing, but still the same old genial Frank.

If we are going to have a foreign tour, why not mention Percy McCullough, who likes it so well that he has located permanently in Manchester, England? Mac extends an invitation to every '14 man visiting England to call on him. He promises to stage a reunion that is at least illegal in the United States.

O. C. Clisham writes in from the Manchester Gas Company in Manchester, N. H., with which he is actively associated. In explaining his lack of recent correspondence, Clisham writes that he lost his wife on May 31 of last year. We all extend to him and his three children our sincerest sympathy in their great loss.

The questionnaires have brought to light a number of previously unreported vital statistics, prominent among which are the following: the arrival of a third son on September 10, 1928, to B. P. Crittenden; also a third son on November 22, 1924, to C. Shepard Lee; a son on May 22, 1927, to E. D. Hayward; two sons to Nelson E. Baxter, one in 1925 and one in 1928; and a second daughter, now nearly two years old, to R. F. Zecha, who is Treasurer of the Prospect Weaving Company of Pawtucket, R. I. — HAROLD B. RICHMOND, *Secretary*, 100 Gray Street, Arlington, Mass. GEORGE K. PERLEY, *Assistant Secretary*, 21 Vista Way, Port Washington, N. Y.

1915

This is the last issue of what I hope you will feel has been a successful year for the Class of '15 column. We have heard from many different men, from many different parts of this country and the world. I am sure this has renewed interesting and pleasant contacts among our classmates. Let's continue it next year. Meanwhile, during the approaching summer I want you to write in about yourselves and let me have your ideas and suggestions for our Fifteenth Reunion in the summer of 1930, for which definite plans must be made this fall.

Larry Landers, X, recently wrote me that Dr. Henry Fay, who was so well liked by all in Courses V and X, has been seriously ill and seems to be getting worse. Larry suggested that Dr. Fay would appreciate a few lines from the Class, so on May 22 I wrote as follows: "On behalf of the Class of 1915 I am writing to tell you that we are shocked to know of your illness and that we are sincerely sorry for you. We all recall, especially those from Courses V and X, our interesting and pleasant undergraduate contacts with you, so that whatever we can say to you now is but a small expression of our high regard and deep feeling for you. Please know that we shall cherish a kind memory of our work and associations with you. The Class joins me in wishing you a speedy and complete recovery." Dr. Fay was a splendid man and a likeable teacher.

1915 Continued

In a recent Boston sport page article on "The Magic of the New Boston Garden," we read about the transformations that are quickly accomplished there to accommodate the different attractions. And lo! the man who waves the magic wand is John H. O'Brien, superintendent of the building, and no crew of theatrical scene shifters functions with more precision and speed than does the picked gang which works under his direction. The article is adorned with a picture of John which makes him pretty good looking since he is wearing a hat and his shiny bald head doesn't show. John was at our Boston class dinner, behaved well, and paid his dues so he deserves these few lines.

The following letter from Al Hall, I, of Berlin, N. H., shows what a lot of punishment (and humor) a class secretary has to take — and at his age, too! "I have just finished reading the Class Notes in the May Review. If you ever want to hear from me again with padding for your sheet, cut out the 'f' in my nickname. Al is fine, couldn't be better, but Alf is at the other extreme, and to date I know of only one man who used Alf and got away with it. There was a reason. It is difficult to call a man down 200 miles away, but I hope you will consider yourself duly chastised. Thank you. It may interest you to know that my brother, who was with me at the Annual Alumni Dinner, is a Captain in the United States Army, at present located with the Department of Military Science and Tactics at the Institute."

From 4707 39th Street, Long Island City, N. Y., Albert H. Anderson writes: "Just a line to inform you of my new address. Although it's some time since I wrote anything for the Class Notes, I enjoy reading about others in The Review. I have recently started to work for Patrick McGovern, Inc., of New York, on the Manhattan Board of Water Supply tunnel. I was very much grieved to hear that Howie Thomas left us. The only '15 man whom I can remember meeting for some time is Vic Bronsen, now with the Board of Water Supply of New York. I have seen no recent write-ups of my friend, George Rooney. What's happened to him, and also to Larry Quirk?" Glad to hear from you, Andy. I recently saw George Rooney in Cambridge, but I'd have to see you personally to tell you about him. Larry Quirk is a big (physically, too) dirt and gravel guy in Middletown, Conn. He is married and has four children — that is, four when I saw him about three years ago!

From 15 Audubon Park, Lynn, Evers Burtner wrote as follows: "Unfortunately I could not be present at the recent '15 Class Dinner. You are certainly doing nobly in awakening interest and deserve a great deal of credit. I do not know whether you knew that we now have two children, James Emory having appeared on the scene about six months ago." We missed you at the Boston dinner, Evers, but hope you will show up for the activities next fall. Congratulations from us all on the new baby.

A choice bit of news for this month is from Mrs. William R. Holway, who writes about Bill: "Mr. Holway wanted me to write you and give you the personal news regarding him which might be of interest in your next class letter. He sailed last night for Moscow, Russia, with Samuel R. Rosoff, of the Rosoff Construction Company of New York, and his party. Mr. Rosoff is interested in about \$200,000,000 worth of subway and waterworks for Moscow, now a city of about three million population. Bill is to make him a report on a contemplated new water supply for the city. He resigned from the Lock Joint Pipe Company on April 1. His address as consulting engineer will be 30 Church Street, New York. There may be more interesting news on this Russian project later and I will be glad to keep you informed." If either she or Bill will write again I know we will all be pleased to know something about this big job he has gone over to do.

Lawrence H. Bailey, X, writes with a title of chemical engineer, 5124 Newhall Street, Philadelphia, Penna.: "Enclosed are a couple of tickets to the Chemical Show where I will be this week. Perhaps you or some of the old gang can use them. Quite a few of the boys show up at this exposition. I will try to drop you a line after it is over as I may have news from some one who hasn't been in The Review lately. I saw T. G. Brawn's appeal in the May issue and have written to him. I have been with F. J. Stokes Machine Company ever since I left Technology. I have a New England wife, a nine-year-old son, and have acquired a house and lot, a Buick, and a little stock in the company. I will surely try to get to the 15th Reunion if it is held in New York." This is Bill's first contribution to the column and it's a good one. I enjoyed the paragraph describing his accomplishments. He seems to have done his share all right.

Allen Abrams, reliable as always, writes again that he enjoys the excellent lot of letters and information in the last issue and that he thinks it is interesting to hear of the lines of work the various men have gone into and of their success. All these letters make me feel good for they show that the men have revived interest in our Class and are supporting the column with splendid contributions.

A number of fellows have asked for some class statistics. These the Alumni Office has kindly supplied. We have at present a class mailing list of 433, consisting of 284 graduates, associates and life members, and 149 non-associates. Geographical division is as follows: United States, 409; Mexico, 2; Canada, 5; foreign, 17. In 1915, 321 degrees were awarded: 283 S.B. degrees and 32 Doctor's degrees. There have been 33 deaths, three of which were during undergraduate days. This is unusually high for men of our age. I have been unable to determine which of these were war casualties, but I think at least two, and perhaps three or four. From the mailing list we received dues from 114 men, or about 26 per cent, including one each from Spain, China

and Mexico. This is an excellent response from you fellows and I thank you a lot.

Mitch Kaufman, X, has recently purchased the Converse Rubber Company, Malden, which he will operate in conjunction with his other plant, the Hodgman Rubber Company at Framingham. Upon completion of the details of organization, Mitch sailed in May for six or seven weeks abroad, a combination of business and pleasure. I expect we should hear soon from Frank Scully on what he saw and how he behaved on his recent European cruise.

A card announces the birth of Marguerite Lempereur McMurtrie on May 16, 1929. Congratulations to Douglas and Mrs. McMurtrie up in Berlin, N. H. This ties him with Waldie Pike and Leslie Heath, who also have four children. You know Doug married a Parisienne while he was over there in the service, hence the middle name probably.

I hope you all enjoy a pleasant and happy summer. Look me up if any of you are in Boston. I will be glad to see you. — AZEL W. MACK, Secretary, 377 Marlboro Street, Boston, Mass.

1916

When I was over in New York on business the latter part of March, I learned by chance that there was to be an alumni dinner at the Waldorf-Astoria, and was fortunate enough to be able to attend. I can assure you that it was more than worth while, for there were thirteen '16 men present, and we had a rousing good time. Attending the Annual Alumni Dinner in Boston the preceding month was like going to a funeral in comparison. The following boys were present: Dutch Gaus, Horace L. Bickford, Robert E. Wilson, Frank E. Richardson, Jack Burbank, Bill Shakespeare, Ed Barry, Steve Brophy, Walt Binger, Bill Knieszner, Lawrence Delabarre, and Bailey Townshend.

I had talked with Bill Farthing on the phone the night before the dinner, and he promised to attend. He didn't show up — evidently because he was busy moving his office, for several days later I received an engraved notice to the effect that Huston Properties Corporation (Bill is one of the firm) had just moved their office to 10 East 40th Street.

Jack Burbank is Vice-President of the John W. Ferguson Company at 420 Lexington Avenue. Ed Barry is associated with the West Virginia Pulp and Paper Company as superintendent of power. His office is located at 200 Fifth Avenue. Apparently his time is not entirely taken up, for he confided to me that he had just written a book on three cushion billiards.

Bailey Townshend writes as follows in response to my call for news: "A letter such as yours lends what I believe Shakespeare (the elder) called the 'human touch.' Since leaving the secluded cloisters of academic life after a year in the Physics Department at Yale, I spent four years in the engineering department of the International Business Machines Corporation, the last two years as engineering

1916 Continued

assistant to the President with the complicated title of Secretary of Engineering and Manufacturing. This company, among other things, controls the Tabulating Machine Company, makers of the Hollerith tabulating machines. In this connection about a year ago I had considerable contact with the interesting department store tabulating system of Woodruff and Rogal, with which Rusty White is working as described in a recent issue.

"About six months ago I joined the development and research staff of Johns-Manville, Inc., as physicist. My work is situated at the Manville plant near Bound Brook, N. J., which caused the recently recorded change of address to Westfield. Johns-Manville, as you know, makes a very diversified line of products such as asbestos lumber, shingles, roofing materials, cements, insulating materials, asphalts, brake lining, and so on, among which lurk many problems for a physicist.

"My wife, a Ph.D. at Technology in 1924, is in patent law in New York. Our son, Richard Eyre Townshend, under such circumstances, seems preordained for matriculation at Technology about the time of our Thirtieth Reunion."

The latest news from Detroit, via Chuck Loomis, is to the effect that Jeff Gfroerer, after being transferred from one section of the country to another, is now assistant director of sales of commercial cars and trucks in the Dodge Brothers Motor Car Company. — Ted Hine, Phil Baker, and Chuck recently served as a committee to select the winner for a \$400 freshman scholarship, donated by the Detroit Technology Club. This was the first actual scholarship from the Detroit district, although one had been talked about for several years. — There are now three '16 men as vice-presidents of the Technology Clubs Associated — George Ousler, Jack Burbank, and Chuck Loomis.

Earl Mellen has just moved from Newark to 393 Wyoming Avenue, Maplewood, N. J., the reason being the necessity for securing larger accommodations for four husky boys. Earl is still Treasurer of the Weston Electrical Instrument Corporation of Newark, N. J. — Irving McDaniel bemoans the fact that he never has the good fortune to see any Technology men. He has just been ordered to the U. S. Navy Yard at Cavite, P. I., for two years.

Bob Crosby has just moved to 14 Grafton Avenue, East Milton, Mass., and writes as follows: "Charles J. McCarthy, Course I, gave a very interesting lecture at the Institute recently on practical airplane design, with movies taken at the Chance Vought Company, with whom he is now connected. As for myself, I have for the past ten months been conducting research work at Technology on power transmission for Graton and Knight of Worcester. I have just this week connected with the United Shoe Machinery Corporation at Beverly."

B. C. Boulton, associated with the Keystone-Loening Company, at Bristol, Penna., is designing a 30,000 pound amphibian, which is the largest as yet

contemplated. The plant has already passed its preliminary wind tunnel test. — A son, Marshall Symmes, was born on April 10, 1928, to Mr. and Mrs. Marshall S. Wellington. — Word has just been received that Russell H. White and Miss Eleanor Morse Savi of Brookline, Mass., were married on April 8. — HENRY B. SHEPARD, *Secretary*, 269 Highland Street, West Newton, Mass. CHARLES W. LOOMIS, *Assistant Secretary*, 7338 Woodward Avenue, Detroit, Mich.

1917

Estabrook and Eaton recently received an order for a box of their best twenty-five-cent cigars to be called for. On May 11 A. P. Dunham called up and in a subdued voice asked that the order be changed to read two for a quarter, delivery by messenger. Twin daughters! Mary Louise Dunham and Ann Sawyer Dunham are now at home and the whole family is reported well and happy.

R. D. Fay has been appointed research associate on the staff of the Department of Electrical Engineering at the Institute to develop the subject of acoustics in communications.

The Providence *Journal* informs us that Miss Gerda Richards, the daughter of Mr. and Mrs. John Bion Richards, became the bride of Irving Ballard Crosby of Boston. The bride was graduated from Smith College and did graduate work at Radcliffe. Crosby, who was graduated from the Institute, has done graduate work at Harvard and Columbia. Mr. and Mrs. Crosby will live at 12 Prescott Street, Cambridge.

A Washington dispatch of April 20 said "President Hoover today appointed William P. MacCracken of Illinois; Edward P. Warner of Massachusetts; and Harry Frank Guggenheim of New York, as additional members of the National Advisory Committee for Aeronautics, increasing the membership from twelve to fifteen as authorized by a recent act of Congress."

Warner's career in aeronautics is given the following tribute in an editorial in *Aviation*: "American aviation has been singularly fortunate in the quality of the men who have been at the head of the government departments during the past few years. These years have been years of extraordinary growth and during them the Government has laid down policies and established precedents which will greatly influence the course of aviation. Those in the industry will regret that these same men cannot all continue during the next four years. We have become acquainted with them and even though their successors be excellent men it will take some time before a new relationship is established.

"Edward P. Warner, who has resigned from his post as Assistant Secretary of the Navy for Aeronautics, leaves his term of public office with his reputation much more firmly and widely established than when he left the professorship at the Institute. He has met many men with the sincerity of his interest in aeronautical development and with the depth of his

knowledge of the subject. He has done more than his share in spreading the gospel of aviation to the serious-minded and intelligent citizens of this country. He has willingly and effectively cooperated in many movements for the fostering of aviation and the breadth of his views has helped guide them along sound lines. We wish him the success that he deserves in his private life, and are sincerely sorry to see him leave his post with the Navy." — RAYMOND S. STEVENS, *Secretary*, 30 Charles River Road, Cambridge, Mass.

1918

To the long list of our vice-presidential members must now be added the name of William Wier, who was recently appointed Vice-President, Assistant Secretary, and Assistant Treasurer of the International-Great Northern and the San Antonio, Uvalde and Gulf, and has furthermore been elected Vice-President of the Denver and Rio Grande Western and the Gulf Coast Lines, with headquarters in New York. Nor is this all. He has been elected a director of the Missouri Pacific, the Gulf Coast Lines, and the Texas and Pacific. So Bill comes from Denver where one can always see snow on the distant Rockies, to the Big City where the canyons are of the man-made variety. How about a few passes, say to Yellowstone Park and return?

Little by little the single men are succumbing. The latest one is Henry M. Blank, the announcement of whose engagement to Evelyn Bayne is given two sticks of type in several papers. We wonder whether Henry's having been an artillery captain in the World War increased his sales resistance. Edward A. Mead has gone even farther than Henry. He was married on April 27 to Miss Mary Lyon Hoyt. They will be at home after July 15 at 5 Thames Street, Norwalk, Conn.

Now to turn from those who have added to those who are multiplying. Don MacArdle welcomed his first child, a daughter, on April 17, just two days after the Boston get-together at which Tom Kelley announced the arrival of his fourth child and first son. We all remember that at Reunion, Tom and his wife said they had three girls and now wanted three boys. More power to them. To date, however, Freddie Washburn's five maintain unchallenged his position as the classmate who cuts Margaret Sanger's lectures most persistently.

At St. Paul's Cathedral on Ascension Day, May 9, George Ekwall was ordained to the Priesthood of the Episcopal Church. His first parish is Christ Church, Waltham, Mass.

After having designed a new mansion for Jack Sharkey, the prize fighter, and supervised the building of the same in Chestnut Hill, Bill Wills is speaking over WEEI every Monday evening at seven o'clock for the Home Builders Association. Another architect, Sam Chamberlain, is covering himself with glory both here and abroad. Sam was a professor of architecture at Ann Arbor in 1925-26. He won a first honorable mention at the

1918 Continued

Paris Spring Salon in 1925, and a bronze medal this year. His drypoint etchings are in many collections in this country, and three of his prints recently were added to the permanent collection of the British Museum. He had an exhibition at the Dunthorne Galleries in London during the winter and another at the Simonson Galleries in Paris this spring. He has just conducted successful exhibitions in New York, Boston, and Cleveland. For some years Sam has been a contributing editor of *The American Architect*, for which he writes monthly articles on European architecture.

While in New York recently we saw Mal Eales and Pete Harrall. After years of emulating Horatio Alger, Mal has now moved up one floor in the Tel. and Tel. Building, and has a private office all his own. Outside the window — and the elevator boy only knows how many floors down — is the graveyard of St. Paul's. Just jump and there you are. — F. ALEXANDER MAGOUN, *Secretary*, Room 5-328, M. I. T., Cambridge, Mass.

1919

The mailbag contains considerable material of interest for our column in this month's Review and we are very grateful to contributors. To begin with, we find in the New London, Conn., *Day* a reference to Captain E. W. Hill, whom we believe piloted one of the balloons in the recent National Elimination Balloon Race in Pittsburgh. Captain Hill has had much experience with lighter-than-air craft.

I have before me a fine letter from L. R. Sorenson who is located at Newport News, Va., with the Newport News Shipbuilding and Dry Dock Company. Sorenson went to this firm direct from the Institute along with twenty-four other '19 men, and he, alone, is left and his excellent progress there has been his reward.

Ed E. Saunders, after overcoming his native modesty, writes me from Spokane, Wash., where he is engaged by the American Firebrick Company in making mud and water into money. One of his hobbies is volley-ball, and when he wrote he was just due to leave home for a title match between some northwestern Y. M. C. A. teams. Hope you captured it, Saunders. By the way, Saunders has two children: Teddy, aged five and a half, and Marie, aged three and a half.

Ed Schofield is with the Washington Water Power Company and lives at the University Club in Spokane, Wash. I am told that he is still single. — The Springfield, Mass., *News* for December 29, 1928, announced the marriage of Myron H. Clark to Miss Mary Carson Orr of Hartford.

Arnold Staubach writes from Box 905, Kerrville, Texas. Our expanse of country does not lend itself kindly to class reunions and we are sorry that for this reason Staubach cannot be with us in Marblehead in June. Speaking of the Reunion, the reports so far indicate that a good number expect to be there. — WILFRED O. LANGILLE, *Secretary*, 144 Acme Street, Elizabeth, N. J.

1920

At Technology Open House I had the good fortune to run into Elbridge Wason, who is a statistical expert for the Old Colony Trust Company. He told me that Al was still in New York, residing in Montclair, I believe he said. The Wason twins came pretty close to presenting the world with twin cousins last November when Barbara Jean Wason arrived at the home of Elbridge just one day before Harry Henderson Wason made Al a proud father.

I also caught a glimpse of Herb Rates, but had no opportunity to get any news from him. Hank Pierce has again come to bat with the following news for which I am duly grateful. If only more of you fellows were as helpful as Hank, your poor old Secretary would have fewer gray hairs. Hank tells me that the boys who have been at the Institute in a teaching capacity are carrying off their full share of the honors, three of them now enjoying assistant professorships — F. W. Sears in Physics, L. Harris in Physical Chemistry, and Ernie Huntress in Organic Chemistry. Ralph Bartlett has been seen doing research work at the Institute and we believe has some connection with a soap factory in Cambridge. Carl Leander is with the Feculose Company, as well as having made a name for himself as a politician in his home town of Quincy, Mass.

Give Art Littlefield credit for some class spirit. He wrote, then wired me from Chicago, fearing that we might be having a reunion this spring and that he might miss it. I take it from the letterhead that he is with the Textile Bag Manufacturers Association at 205 West Wacker Drive, Chicago.

Scott Carpenter is back in these parts and is living at Scituate at the present time. He has been with the Wisconsin Electric Company at Racine for some time past and says he is as glad to get back to Boston as we are to have him back, which is saying a good deal. — HAROLD BUGBEE, *Secretary*, 9 Chandler Road, West Medford, Mass.

1921

Removal from Camden to the metropolitan New York area is your Asec's only alibi for non-appearance of these notes recently. Although we reluctantly confess that there has been no vast increase in our mail due to the omission, perhaps, now that our alibi is out, Jack Kendall will favor us with another of those "cheaper to move than to pay rent" witticisms for our next meeting on these pages.

We received a personal note from R. J. Spitz, X, on the letterhead of the General Naval Stores Company at 90 West Street, New York, manufacturers of various products of the pine tree. Dick has been with them for the past three years, spending some of his time traveling around the eastern part of this country and Canada. Any who meet up with him will do us a favor by reminding him to make good his promise to send in those news items of

the '21 men he meets. Long lost P. H. Hatch, VI, sent in a newsy letter which we much appreciate even if we must penitently crave his forgiveness for failure to announce his marriage some four and a half years ago. Phil is an engineer of automotive equipment located in the general offices of the New York, New Haven and Hartford Railroad at New Haven, and though he provides us with no information about John Coolidge, which might give *The Review* a big scoop, he does tell us that his duties include the engineering on gasoline-mechanical and gasoline-electric rail cars, together with the care of shop electrical equipment, electric locomotives and multiple unit cars. He travels a great deal, the present opus being written on a western trip during the course of the fifth consecutive evening on a so-called sleeper. Phil saw Jim Entwistle at the Institute on the occasion of his lecture to the latter's class in electric railways. Mr. and Mrs. Phil and the two year old daughter live at 10 Rippowam Village, Stamford, Conn.

The disappearance of '21 from these columns gave us the satisfaction of receiving at least one hot letter in protest. None other than our old friend, L. O. Buckner, VI-A, breaks a seven year silence with an enthusiastic declaration that Course VI-A news will henceforth be greater in volume than the notes from any other Course. As the Secretary of the Course he proclaims *The Review* as the official news organ and instructs all members of the Course to send their news direct to '21's Secretaries. Buck continues: "Rufe Shaw recently stopped in York on his way from Baltimore to Philadelphia and was the first classmate to cast surprised eyes on a new son in the Buckner family, James Pitt Buckner. Rufe is enjoying matrimony with a belle of Birmingham (R. W. Smith, please notice) besides being chief efficiency engineer, advertising manager, and director of research of the U. S. Cast Iron Pipe and Foundry Company of Burlington, N. J."

"I understand from R. H. Gilbert, chief amortization engineer of the New York Telephone Company, that the cold which Pip Coffin had when I saw him in East Orange some months ago developed into mastoid. Fortunately he has recently returned to his duties as technical director of Aluminum Cable Steel Reinforced. Gillie is very busy at present keeping a 1924 Buick in repair in anticipation of matrimony. (Note: The *Boston Evening Transcript* says: 'The engagement is announced of Ralph H. Gilbert of New York, son of Mr. and Mrs. Robert N. Gilbert of Needham, Mass., to Miss Ruth Tertsch of New York.' Judging from a recent conversation with Gillie and other information hereabouts, the big event may have taken place before we go to press. — Asec.)

"Yours truly having been employed by the Metropolitan Edison Company of 123 East Market Street, York, Penna., as propagandist and statistician for three years and subsequently having been found

unfit for the newly formed chair of supervisor of office boys, has taken the path of most resistance and is attempting to indicate to some 100,000 Pennsylvania Dutch for what and with what electricity should be used." Space compels us to omit Buck's tribute to Doug Jackson and Timbie and a clever parody on "Success" *à la American Magazine*. Thanks for the letter, Buck, and many congratulations to you and Gillie. We'll welcome all the VI-A news that is sent in. Perhaps some of the other Courses will go and do likewise.

In attendance at one of the regular weekly luncheons of the Technology Club of New York your Asec ran into H. A. Kaufmann, X, and A. W. Norton, XV, who tell me that their offices are close enough to permit them to be old standbys at these affairs. Herb is in the Technical Service Department of Stein, Hall and Company, Inc., at 285 Madison Avenue, and Warrie is publishers' representative with O'Mara and Ormsbee, Inc., at 280 Madison Avenue, both of New York City.

From the Albany, N. Y., *Radio Engineer*: "The DeForest Radio Company announces the appointment of H. A. Hutchins, Jr., XIII-A, as New York district sales manager. Mr. Hutchins came from the Kolster Radio Corporation, where he was assistant general manager of the merchandising division. He was graduated from the U. S. Naval Academy and served in the Construction Corps in the Navy."

The Colebrook, N. H., *Sentinel* says: "The engagement is announced of Miss Doris Evelyn Pike to Robert William Haskel, II. Miss Pike is a graduate of Fitchburg Normal school and has been teaching at Revere. Mr. Haskel is located in Concord."

From the Brockton *Enterprise* comes the following: "The Honorable and Mrs. Fred N. Cross of South Royalston, have announced the engagement of their daughter, Bertha May, to Edgar Stuart Russell, II, son of Mr. and Mrs. G. Edgar Russell of Market Street. Miss Cross was graduated from the School of Education, Boston University, and is now teaching at Middleboro. Mr. Russell is a valuation engineer for a New York concern."

A real Technology wedding took place on April 18 when Meade Ashley Spencer, IV, and Emily Pierpont Stickney '22 were married in New York City. After a summer spent in Europe Meade and his wife will live in Cleveland.

February 18 was a big day in the home of G. E. Farmer, VI. Gef proudly announces the arrival of a son and heir and future exponent of Elcosinethetaism, Jack Cooper Farmer. The Farmers live at 1821 Westmoreland Boulevard, Los Angeles, Calif.

"A. Stork" is the author of a miniature volume entitled "The Randalls, A Comedy in Two Parts, Part Two," copyrighted May 4, 1929, by Helen and Larcum Randall, VI, of Newton Highlands, which tells of the arrival of Donn Spalding. This volume forms the second by Mr. Stork, who will be remembered by "Gubby, Part I."

As most of you know, the merger of the Victor Talking Machine Company with the Radio Corporation brought about the disbanding of the Engineering and Research Departments of the Victor Company and the dismantling of the building of laboratories at Camden. In the general exodus your Asec has returned to the Bell System and is now engaged in sound picture development with the Bell Telephone Laboratories, Inc., 463 West Street, New York, and the usual luncheon awaits all '21 men who apply in person. My home address is 56 South Oraton Parkway, East Orange, N. J., where the telephone number is Nassau 6822. Drop in for a visit if you are in the vicinity. Best wishes to everybody for a pleasant summer. — RAYMOND A. ST. LAURENT, *Secretary*, 225 Cleveland Avenue, Whiting, Ind. CAROLE A. CLARKE, *Assistant Secretary*, Bell Telephone Laboratories, Inc., 463 West Street, New York, N. Y.

1922

"You will recall, of course, that the July issue is the last to be published before November." So say the Review Editors in issuing their last call for notes for this volume. It sounds a little like Chic Sale's remark that "regular Monday evening choir practice will be held on Tuesday night, instead of Friday," but we suppose it's all right. We are also asked to be as concise and brief as possible. That is all right, too.

Some idea of the versatility of the Class can be gleaned by a rapid survey of the newspaper headlines attached to stories with which The Review Office kindly furnishes us: "Art in Boston"; "Engagement has B. U. and Technology Interest"; "Engagement is of Smith-Tech Interest"; "Surprise Thanksgiving Day Guests by Wedding Ceremony"; "Woman Enters Another Field in Big Business"; "Engagement Is Announced"; "New Method Cleans Rusty Water Pipes." And a varied lot they are.

That, ladies and gentlemen of my constituency, is the topic I have chosen for discussion this evening. Let us go back and take these items in order. "Art in Boston" yields the fact that our gifted friend Roger Hayward, IV, who used to lighten the monotony of study in Rogers by designing Tech Show posters and the like, is now lightening the monotony of being employed by Cram and Ferguson, by doing water colors. These formed the central feature of an exhibit held last February at Grace Horne's Gallery, and if you have any comments on why this event isn't announced until six months afterwards, please address them to The Technology Review, not to your Secretary, who promises that he never received the clipping until May 14. Says the *Christian Science Monitor*, of Roger, "He does not follow the easier path, but attempts effects that are difficult. There are dark recesses in the wood, snow enveloped in cool shadows, mountains enveloped in hazy clouds, active waters on rocky paths. The painter tries in each instance to adapt the technical method to the situation and

it is this variation that points the way to the development of his talents." So much for "Art in Boston."

The engagement that has B. U. and Technology interest dates back (Secretary held blameless) to January 5. The year, however, is current. The engagement was that of Miss Evelyn Mary McKenzie to Clarence William Perkins of Everett. Our congratulations, which by now most probably apply to the wedding as well. As for the Smith-Technology engagement, that is by now twice-told. These columns for last May got around to chronicling not only the engagement, but the marriage of Miss Sarah Gordon to Henry Clifford Gayley. We take this occasion of renewing congratulations.

We take this occasion also of suggesting that somebody in The Technology Review Office has been considering Professor Eddington's new book, "The Nature of the Physical World," too seriously. There are conditions of entropy, says the good professor, under which time's arrow has no direction. It looks to us as if somebody had been confusing the words entropy with atrophy.

A further proof that time's arrow is pointing somewhere in the direction of Hengist and Horsa so far as The Review Office is concerned, we offer "Surprise Thanksgiving Day Guests by Wedding Ceremony." This Thanksgiving Day, friends, was the one that occurred in November, 1928; the wedding ceremony was that of Marguerite Faust Nichols to Kenneth M. Burkett; the former of Boston, the latter of Bridgewater. Congratulations are again offered; this time with a certain timidity.

"Woman Enters Another Field in Big Business" is practically current. It goes back to two weeks after St. Valentine's Day. It is an excellent and well justified tribute to our own Dr. Frances Hurd Clark, who is now a metallographist employed in Baltimore. Says the despatch "Dr. Clark is in charge of the photomicrographic laboratory. Hers is a most important job. She makes a study of all the metals used in a large telegraph company in its various operations and their relation to the specific purpose for which each is employed. If a copper line breaks, Dr. Clark studies the problem and finds out just what was the failure of the wire. At other times new materials or tools of one kind or another must be examined and carefully studied for possible defects before they are put to use. When the company wanted to find a skilled metallographist, it expected to find a man to do this highly technical job. Officials said the person best fitted for the job was a woman. However, the corporation was not seeking a man or a woman so much as it was an expert in this particular type of work." And all of us who remember the purposeful stride in the Institute corridors of the now-Doctor Frances will realize that the telegraph company has found what it was seeking.

We must dig a little deeper into the calendar again by way of explaining "Engagement is Announced." This is a despatch from the Brockton *Times* of

1922 Continued

February 8 which stated that "At an afternoon tea held at Hotel Statler last Saturday afternoon, the engagement of Miss Alice M. Jones, daughter of the late Dr. and Mrs. John M. Jones, to David J. Roach, son of Selectman and Mrs. Michael F. Roach of this town was announced." The despatch goes on to say that David has been engaged in highway construction in partnership with his father for the past several years, and that he is a member of Bridgewater Council, K. of C., and the Brockton Lodge of Elks.

"New Method Cleans Rusty Water Pipes." We really get all choked up over this. The despatch is from the Morenci, Mich., *Observer* for February 28, 1929. The account from this great daily begins "New York. — Rust choked iron water pipes in a 35-story New York office building have been cleared by a new acid solvent and the vast expense of repiping the whole structure avoided. The process, worked out by F. M. Speller, E. L. Chappell, and R. P. Russell, of the Massachusetts Institute of Technology, is expected by engineers to become a very important factor in building management."

This is fine, thrilling news. We have only one comment, and that is in the nature of a small warning to the searcher employed by *Time*, the weekly news magazine, who even as you read is probably just about to clip this story out, paste it on a flimsy, write *Must* in the upper corner, and shoot it to the composing room. The warning is this: it is a good piece of news, but this particular 35-story building was purged by the Messrs. Speller, Chappell and Russell almost three years, come Michaelmas. It was in 1926 that your Secretary remembers very well holding the hand of Professor Robert Price Russell, who, on the eve of the experiment, was having a bad attack of the jitters, and had had a nasty qualm to the effect that if the inhibitor in his hydrochloric acid didn't inhibit enough, a good deal of excellent iron and equally excellent Carrara marble with which this cathedral of commerce had decorated its washrooms would be converted to the chloride form with the consequent release of generous quantities of hydrogen and of carbon dioxide. The suggestion then made by your Secretary that Professor Russell take along the dirigible *Los Angeles* and a Liggett drugstore soda fountain to utilize what would otherwise be mere waste byproducts, was not received with the scientific detachment which should characterize the mood of every true laboratory worker. None the less, your Secretary was again privileged, two evenings later, to help this gifted if irascible follower of Lavoisier to celebrate the complete triumph of this experiment. But all this, we repeat, was in 1926; so don't stop your presses, Mr. Luce.

We are now proud to present four items which have transpired since the March solstice. Malcolm L. Fisher, on April 21, for example, was sufficiently inspired from P. O. Box 178, Sonyea, N. Y.: "I certainly was elated to see, in this morning's paper, that we outrowed the Navy,

and please give the crew my best wishes. I have nothing in the way of news, for our life is very regular and even here at Craig Colony."

Mr. and Mrs. Hobart Fischer announce the birth of Betty Louise, weight seven pounds and twelve ounces, on May 1, 1929. We dig deep again into our draught of congratulations.

Then we did actually dig up some news, ourself, too. We met Rod Pettengill, the first live roaming classmate we have seen in months. He promised to send us a long letter of news and did come through next day with the announcement that he was the father of a daughter Nancy, born on August 13, 1927, and that he had recently moved from the Providence to the Boston office of Estabrook & Company, high grade securities, if you will look at your daily paper.

Then, only a few days ago, what should happen but that Bill MacMahon should irradiate the sunset of our life with a five-page letter, written from Oklahoma City. We excerpt: "I don't see you as much in the papers as Will Rogers, but here is a little neighborhood gossip. Prospects were good for a dull winter in housebuilding in suburban Washington, D. C., and the U. S. Division of Building and Housing needed someone with building experience to make a survey of recent trends in small dwelling construction, so I applied for the job, and here I am in Oklahoma City. The only address at which you can reach me is my home address, 408 Greene Ave., Aurora Hills, Va., from which mail will be forwarded."

"At that address right now my nine-months-old daughter is handling the mail. If that doesn't take the prize, maybe her birth weight will. I imagine she was the smallest class baby: two pounds and four ounces, but now weighs fifteen pounds."

"I didn't see any classmates in Boston, but Elmer Sanborn is nearby with the Edes Manufacturing Company in Plymouth and goes over to Technology to run occasionally. In Bridgeport, I looked up Chet Greening by telephone, but his sister told me he had moved to somewhere in New Jersey. He can be reached by having mail forwarded from the address on the reunion list. Gus Hemeon wrote me inviting me to drop in on him at Plainville, N. J., but I couldn't make it. He was planning to move to Toledo with the same company. I met H. W. McCurdy, who is Vice-President of the Puget Sound Bridge and Dredging Company in Seattle, in the Union Station, Washington, a few weeks ago. He looked bigger than ever, said he was going to visit Technology and that John Molinar is with the Pratt and Whitney Tool Company at 111 Broadway, New York."

"In Chicago I saw Francis Slater, now engineer for the Manufacturers Mutual Fire Insurance Company of Providence, R. I., with headquarters in the Marquette Building, Chicago, and John Plimpton, western manager for the Pennsylvania Crusher Company, 333 North Michigan Avenue. Wes Manville is also there with the Standard Oil Company of

Indiana. Art Meling was another one I didn't see, but who is in Chicago. J. Sterling Kelley is in Chicago pretty regularly, but was on the road just then."

"Bill Pinkham is in charge of the Kalamazoo plant of the Minwool Company, and knows his insulation. He had the works to pieces when I got there and was putting it together again with plenty of parts and lost motions left over for the second-hand-man. George R. Hopkins is with Uncle Sam in the Bureau of Mines. His home is on Davenport Street, N. W., Washington, D. C., and he has three youngsters."

Thank you, Bill. You have helped me to save a few remnants of journalistic honor. And I need all I can get, heaven knows, after this year.

I have no idea yet who the new General Secretary will be. As soon as I am apprised, I shall turn over to him the Seal of Office, a framed copy of a letter written in blood on asbestos by Tommy Gill, which will serve to remind him, as it periodically did me, that there is apparently such a thing as being too funny, and a bankbook that has no bank balance. These were the trappings of our office. Each Secretary must supply his own ermine.

Now, doffing ours, which has pretty long needed to go to the dry cleaners, we thank the Class for its long indulgence and beg to assure them that the first seven years were the hardest. — ERIC F. HODGINS, *General Secretary*, 8 Arlington Street, Boston, Mass.

1924

I have no lengthy accounts this month, but I have a lot of small items about various members of the Class, so let's begin. Professor Locke tells me that Ray Sneade has left the Semet-Solvay Company and is now with the Natural Gas Engineering Corporation on a \$35,000,000 construction program which will last two years bringing natural gas from Munroe, La., to the Birmingham section of Alabama. Just at present his is more or less of a diplomatic office on the job of securing rights of way from the officials of the various counties through which the pipe line must pass, but when the construction is completed, he expects to become a part of the permanent operating staff.

Several weddings and engagements have been announced by the newspapers. In April Harold F. Hunter of Greensboro, N. C., now in Rome, Ga., was married to Miss Laura Weller Graham of Rome. Dave Grant planned an early spring wedding (his engagement having been announced in January) with Miss Dorothy West McConnell of Brookline, Mass. Miss McConnell is a graduate of the Class of '25 of Howard Seminary. David Evans, Jr., was married in January to Miss Myra Louise Halligan of 52 Lloyd Street, Montclair, N. J. Miss Halligan was graduated from Kimberley School and Smith College. In April the engagement of Miss Helen Morgan Voorhees of Jersey City to Edward Curtis Plant was announced. Miss Voorhees was graduated from

1924 Continued

Ogontz School in Rydal, Penna., and is a member of the Junior Service League of Jersey City. Ed Plant is now with the Public Service Electric Company in New Jersey.

Don Moore tells me he is now with the New England Power Company in Boston having left the sales force of the North American Cement Corporation. — Shorty Manning sent greetings for those at the Reunion and regrets that he could not be there. He said he was attending a reunion of work. — Edward Saibel is another that wrote sending his regrets. School with him does not finish until June 15 and then he leaves for Canada on a geological expedition. He is still teaching at the University of Minnesota and would like his friends to write — in particular to have Ralph Raphael write.

Anatole R. Gruenberg has changed his name to Gruehr. He told this to Leland Franke in a letter and immediately got a reply. There must be magic in the name. I can't tell you much of what Anatole is doing because he immediately starts to quote Leland Franke's letter, which I will requote. "My wife and I have a little home two miles from the office, so that it is possible for me to get home to lunch if I like. We also have a puddle jumper called a Ford. . . .

"Lester Twichell, one of our classmates, became engaged to a young lady who lives near here, last Christmas. She is the only daughter of the people with whom he rooms and is a graduate of the Eastman School of Music. Twichell is employed in Distribution Department and myself in the Industrial Sales Department of the Rochester Gas and Electric Corporation.

"While I think of it, Frank Sawyer has moved to Chicago with his wife and son. You no doubt remember him. He is still a traveling salesman with the Baldwin Chain Company of Worcester, Mass." — HAROLD G. DONOVAN, *Secretary*, 139 Girard Avenue, Hartford, Conn.

1925

This month you are going to hear from a different secretary, as Frank Preston is in the hospital at the time of this writing, undergoing an operation. However, by the time these few notes are read he will be up and in the prime of condition.

The other night Ray Wheelock dropped in on us for a short call on his way to Boston for a week-end. He looked just the same as ever. He had just returned, a short time before, from his hang-out down in the wilds of Mexico; said he got out on one of the last trains before the revolution got too strong for him. He is now working down in the New Jersey plant for the same company. — Our old friend, Henry Bacon, is now connected with the Great Atlantic and Pacific Tea Company's stores, merely looking them over so far. — Phil Niles is still with the Metropolitan Life Insurance Company. — We see Don Yakeley once in a while when we wander up to the Technology Club. He is living there now and, from appearances, still enjoying life as much as ever.

By the time these notes are in print your Secretary will have become engaged to Miss Linda Wheeler of Stonington, Conn. Miss Linda is the sister of our classmate and our roommate, Don Wheeler. We have often wondered why Frank made so many week-end visits to Don's home, sometimes with Don and often alone. Now we know! Here's to you, Frank. — Sam Cole was married on or about April 20, to whom I do not know. — I also see that Otto Richter was married last December. News to me, and maybe to many others. — On April 27 Bernard Groenewold was married to Miss Gertrude Oehlmann, in Denver, Colo. — Joe Terrell was married in April to Miss Emma Sue Miles, in Dallas, Tex. — On April 3 a daughter, Barbara Street, arrived in the family of Mr. and Mrs. Fred Westman. Congratulations, Fred.

Now for the engagements. The engagement of Miss Elizabeth Mulholland to Alan Crowell was announced on January 3. Miss Mulholland comes from West Hartford, Conn. — Mr. and Mrs. John A. Obeymeyer of Auburndale, Mass., announced the engagement of their daughter, Miss Christine, to Stephen Freeman, Jr., in the middle of last December. — On April 19, the engagement of Miss Marion Ratcliffe, of Newton, to John Hoxie was announced. — In January announcement was made of the engagement of Miss Ruth Edna Goff to Edward Coburn. — The engagement of Miss Hazel Kenerson to Herbert Alva Lafler was announced in April. They are planning to be married this summer. — In February the engagement of Miss Phebe Earl Lamont of Newark, to Norman L. Mansfield was announced. No information as to their marriage plans has as yet been received. — Don Taber is now engaged to Miss Ida Webber of Holyoke, and the date set for the wedding is the early fall. Don is working for the American Pad and Paper Company.

While we are on the question of weddings and engagements, I will get personal for a bit. On June 1, I was married to Miss Ruth Briggs of New Rochelle, N. Y. We are now living at 20 Eastchester Road, New Rochelle, and will be glad to see any of the boys who may be in the vicinity.

The crowd at 102 East 22d Street is changing around a bit lately. Don Wheeler is working at present in Hudson Falls, N. Y. While he is away, Don Fife is filling in the spare bed. I have left, and I imagine the next to go will be Frank. The apartment is still open, however, to any and all who may be near by, and have the chance to drop in for a few minutes or hours to talk over old times. By the next issue Frank will be back again at this typewriter, pounding out the scattered notes of our Class. — ROGER W. PARKINSON, *Secretary pro tem*, FRANK PRESTON, *General Secretary*, 102 East 22d Street, New York, N. Y.

COURSE II

Recognizing that modesty forbids most of you to write spontaneously of your whereabouts and achievements

since Eddie Miller sent you forth four years ago with his never-to-be-forgotten descriptions of those cherry-red-pipes, I presume that the best remedy for such a condition is to start the ball rolling myself, and thereby hangs a tale.

My only connection since leaving the Institute has been with the inspection department of the Factory Mutual Fire Insurance Companies. After a few months of training in plan work, I was elevated to the position of inspector (or suspector) which means traveling around this country and Canada, visiting manufacturing properties in diversified branches of industry, looking over the fire hazards and protective equipment, but in addition, and of far greater importance, assuming the rôle of a loss prevention engineer, as we are concerned not with fire losses only, but sprinkler leakage, windstorms, and consequent losses of profits due to interruption of business by reason of any of the above.

At the conclusion of eighteen months of field work, I was made an engineer, working in the office a large part of the time, supervising the details of design of sprinkler and fire protective equipment that is to be installed in our risks. I am actively engaged a good part of the time in training new men for field work. Occasionally I manage to do some field work in spite of my office activities. In March I was honored to make the first general inspection for our companies of the Institute, and I must confess that I saw more of the buildings in four days than I had previously seen in four years. . . .

While at the Institute I met McDuffie who is looking better than ever. He is teaching in Springfield and apparently likes the work very much. — Fleeting glimpses of George Witham are obtained at infrequent intervals. He is also a busy fire protectionist but with a different group of companies. — McNeil '26 tells me that Gray is assisting Professor Berry with his thermodynamic courses. I always knew that we were the only crowd who could do those headache propagators of entropy. Mac also advises that last winter Gray took unto himself a wife, Miss Ethalind Cooper, who up to that time was a protégée of the Factory Mutual Plan Division.

I haven't seen Speed Hopkins nor Max Levine for ages. Speed is mainly responsible for the big boom in the stock market and can reel off the quoted and asking price of any issue in his position with Kidder Peabody and Company in Boston. The last I saw of Max, he was waging a campaign against sleepless nights and was selling bed springs for an eastern company. — Tony Lauria is my most regular customer in the correspondence line. I would advise any who plan to visit Havana this summer to visit Tony and listen to him expound the merits of his tires. That is, if you can understand Spanish. Happy summer days to all and secretarial wishes for a pleasant vacation! NELSON D. MALONE, *Secretary*, 184 High Street, Boston, Mass.

COURSES III AND XII

Letters have been received from two of the miners who have kept very silent for some months. Herb Taylor found time in the constant excitement of Herrin, Ill., to write that he still remains in the coal mining game. He also sets up another cry for a few Technology men to keep him company. He threatens to drop in on us at the Institute this summer and all of us will be glad to welcome him.

Jess Maury finally came through with a letter and gives an account of himself for the past year. He left Anaconda nearly a year ago and became assistant manager of the Broadwater Consolidated Mines at Neihart, Mont. This company is working on the development of some silver-lead-zinc properties and the assistant manager has numerous duties, including surveying, sampling, studying the geology of the district, examining properties, and keeping books.

As usual, Count Blonsky has shown up in Boston again, this time fresh from some new experiences with the Dorr Company, filtering the sewage of the City of Milwaukee. One month up there has furnished him with some very interesting stories to add to his already numerous stock. The last heard from him, he was in Westport, Conn., but by now he may be anywhere within 2,000 miles of there. — P. J. Morell paid us a short visit at the Institute the latter part of April. — Every one will be interested to know that M. J. Buerger receives his Doctor's degree in geology this June. His plans for the summer are as yet not complete, but he seems to have some hankering for another dose of Newfoundland.

By the time this appears in print, your Secretary will have had a dose of geophysical prospecting in the Canadian woods of Quebec and Ontario provinces. He left for Montreal on May 21 to become the guest of the Radiore Corporation, Ltd., of Canada, and to study their field practice in the many prospects of eastern Canada. After that, there are all the men to be taught a little mine surveying at Dover, N. J. Any classmate who is in the vicinity of Dover between July 25 and September 15 will be welcome at the Summer Mining Camp. — F. LeROY FOSTER, *Secretary*, Room 8-219, M. I. T., Cambridge, Mass.

COURSE VI

"John Yarmack left the employ of the New York Edison Company quite some time ago. He went from there to the Philadelphia Gas and Electric Company where he stayed a few months. From there he hopped over to Camden, N. J., and took a position with the Victor Talking Machine Company. Here, as I understand it, he picked up considerable knowledge regarding radio and its various applications. After learning all he could from the Victor Company, he hit out for himself again and is now superintendent for the Foote-Pierson Company of New York who are about to move over the river into Newark. Here

he is supervising the manufacture of all sorts of trick electrical devices as his company manufactures relays, and so on, for the Radio Corporation of America, Western Union Telegraph, and other large companies.

"Harold West is working still for the American Tel. and Tel. Co. and is now domestically settled with a bouncing little youngster in West Orange, N. J. Gagliardi is still on the payroll of the New York Edison Company, attempting to keep the ducts in the streets of New York from becoming overheated. . . . Benos and his running mate, Tsongas, are both working for the Board of Transportation of New York which is now building more subways so that seats in subway trains during the rush periods will not be as scarce as radium. From last accounts, Bill Limpery is also striving with the Board of Transportation, attempting to solve the mob problem.

"Norman Mansfield, who went with the Public Service Company of New Jersey after graduation, completed the cadet course which they offered but decided to make his mark in another line of endeavor and is now connected with a financing corporation in New York, the name of which I just cannot recall. Frank Corliss, who after graduation went to the Schenectady works of the General Electric Company, has since been transferred to Cleveland, where I understand he is a refrigeration expert. The last news I have of Arthur Paulson is that he is still connected with the Otis Elevator Company and has, if my memory does not fail me, joined the matrimonial ranks. Harry Postal, who elected sales engineering for his choice of a life profession, was from last reports still selling Balsa Wood products. Down in Washington, D. C., Unc Tarleton is about to become a full fledged patent engineer, having received his training along these lines under Uncle Sam's guidance. The American Tel. and Tel. Co. also boasts of a faithful follower in none other than Rick Wheeler, who must by this time be a settled married man.

"Now that I have given you all the choice bits of gossip that I know about Course VI men, I might add a few words about myself. About a year and a half ago I left the New York Edison Company and took up a new line of endeavor known as sales engineering in the New York office of the Industrial Controller Company. This company has recently merged with the Square D Company as merging seems to be quite the thing of late. As a result of this merger, the new company is transferring me to Philadelphia, where I expect to be located after the middle of this month. Last September I came to the conclusion that bachelorhood should no longer reign in my kingdom and took unto myself a wife, known in private life as Miss Myrtle Steele of West Newton, and we have lived happily thereafter. I should be glad to hear from any of you fellows. My new address is 315 Huntley Road, Upper Darby, Penna." This is the sort of letter a secretary likes to receive.

THE TECHNOLOGY REVIEW

The above letter was received from C.O. Abrahamson. I wish that more of the boys would write long, newsy letters of this type. — C. J. ENRIGHT, *Secretary*, North Street, Greenwich, Conn.

COURSE X

Bill Asbury has left the Institute and is now with the Standard Oil Company of Louisiana at 270 Convention Street, Baton Rouge, La. He is reported to be happily married. — Milton Barber writes that he is still selling electrical measuring instruments to the chemical industry for Leeds and Northrup. He and Mrs. Barber are living in Chestnut Hill, Penna.

Eddie Booth writes his usual newsy letter from Syracuse, N. Y. He says that he finds plenty to do inasmuch as he is in charge of the office, and that covers practically all of the entire state. He has been living with Payson Hammond for some time. He puts a dutiful footnote for those who are always in doubt, saying that he is neither married nor engaged. — Leslie Bragg is furthering the prestige of his Class as an instructor in Gas and Fuel Engineering. He has his name impressively painted on the door in Building Two. — Alex Brown is working with the Tide Water Oil Company and may be reached at 92 West 33d Street, Bayonne, N. J.

Mac Campbell is still at the General Motors Research Laboratory where he reports research problems are plentiful and stimulating. He nonchalantly states that he recently underwent a change of state and that he is not enlisted with the Benedicks. Further details are lacking, but I know we are all glad to hear from him. — Louis Campfield is still designing Deion circuit breakers for George Westinghouse. Besides circuit breaking he has been doing heart breaking, and the young lady has agreed to take the fatal step with him on June 25. Congratulations! He will pass through Boston on his honeymoon to renew acquaintances, on which decision we are extremely flattered.

Rumor says that Lauriston Clark is married and is now living in Los Angeles, Calif. We have checked up on the address and would appreciate a confirmation on the other interesting fact. — Charles Cooper sent in a very interesting batch of news. He reports that Pete Clark is doing something for the "talkies" for General Electric. Bob Hatton is still a chemist for a paper mill in Lawrence, and George Slottman and himself are now occupying the positions of director of the School of Chemical Engineering in practice in Buffalo and Bangor respectively.

I have noticed Gregg Cunningham's name as one of the recent members of the Engineers Club and have been trying to get hold of him. I understand that he is working with the Lynn Gas and Electric Company. — Cuthbert Daniel's mother wrote in an interesting résumé of his activities. He spent last summer in Berlin studying German and was married to Janet Goldwater, daughter of Dr. Sigmund Goldwater, director of the Mount Sinai Hospitals in New York, in Paris, on September 3. Both Mr. and Mrs.

1925 Continued

Daniels returned to the University of Berlin to study, and left May 1 to spend the summer in France, which will be the fourth since Cuthbert's graduation.

Eddie Dirks is back in Danvers preparatory to taking a Doctor's degree at Technology this fall. — John Fielding was reported as being present at the Alumni gathering in Pittsburgh this spring. Repeated letters have failed to draw any more information. I wish that he would open up, as we are all interested in hearing from him. — Bernard Freudenthal is with the A. C. Lawrence Leather Company at Peabody. — Frank Hall is in the laboratory of the Converse Rubber Company at Malden.

Eddie Milne is now working as chief chemist at a textile plant in Griswoldville, just off the Mohawk Trail in western Massachusetts, and reports a couple of new developments which are keeping him interested. He reports the advent of Brian Finlay Milne on November 30. Between times he is assuming the cares of a farmer and is quite interested in horticulture. — Charles Petze is another member of the Class who boasts of his name on an Institute door. He is connected with the automotive laboratory. — Bruno Roetheli has also joined the list of pedagogues and has his name proudly displayed on a Chemical Engineering door.

Arthur Sharp is greatly enjoying married life in his home in Centerdale, R. I., where he and his father are engaged in the manufacture and distribution of the famous Yacht Club Ginger Ale. — Lester Smith has developed a bald spot caused by air friction in running between all points of the sales compass as sales engineer in the interests of the Spencer Turbine Company at Hartford. — Tom Storey is still making maps for the Mississippi Commission with the Civil Service title of "Principal Draughtsman." He reports his marriage on November 15, 1926, to Miss Catherine L. Penniman of St. Louis, Mo., and Wellesley '26.

Dick Wick came in town the other day in the interest of manufacturing his new invention which is a new type of ultraviolet lamp. He has severed his connections with the National Carbon Company and is talking of adding a couple more degrees to his name. — SCOTT EMERSON, *Secretary*, 16 Lawson Road, Winchester, Mass.

COURSE XIV

In the absence of news from the other members of the Course, I am taking the liberty of saying a few words about myself. Although I am employed as chemist by the U. S. Chain and Forging Company, almost any other name would suit as well. "Chauffeur" might do. My principle job is preparing tire chains in different ways and then taking them out on an old Ford truck and breaking them to pieces on Pennsylvania's holy highways, with an occasional excursion into Maryland, whose northern boundary is eighteen miles south of York. Since tire chains are intended for use in snow, ice and mud, driving them over concrete

shortens the time and distance necessary to complete a test. Otherwise I should have to eat, sleep, and write these notes at the wheel of that oil-burning bone-shaker. — HOLLIS F. WARE, *Secretary*, 829 Roosevelt Avenue, York, Penna.

1926

As Lewis Carroll would say (and the Snark is not going to be a Boojum) let us take them in order, the first being the marriages. On March 1 at Buffalo, N. Y., Benjamin Parker Richardson to Miss Ethel Evelyn Jones; on December 1, at Braintree, Henry Cecil Gunning to Miss Edith Frances Fitts; on April 27, in Louisville, Ky., Samuel Eldon Homsey to Miss Victorine du Pont; on May 25, at Georgetown, Richard Winslow Shermon to Miss Elizabeth Whittemore.

The habit of becoming engaged you will agree is growing when I exhibit the following: Henry Claremont Rickard to Miss Frances Keany; Arthur Wallace Baker to Miss Bernice Carter Brown.

The third is ambition. On January 16, to Mr. and Mrs. Eliot N. Bidwell a son, Bruce Eliot, weight seven pounds, six ounces; on March 20 to Mr. and Mrs. E. C. Van Blarcom a daughter, Shirley Rae, weight unreported; to Mr. and Mrs. William P. Lowell, Jr., on April 26, at Newburyport, a son, Harold Noyes, weight eight pounds, eleven ounces. Perhaps it would be well to stop with the recording of these supernal developments, but the folder is not yet empty and it should be over the summer months.

Der Konvergenzpunkt, with sweet persuasions and seductive blandishments, has been striving to obtain a Secretary for Courses VI and VI-A. His correspondence about this matter with George Gross has yielded new information about himself. He is assisting in a lightening investigation on 220 K.V. lines and is finding the work more profitable and interesting than heretofore. — By way of Professor Locke comes news of A. F. Horle, who is now at Parral, Chihuahua, Mexico. The revolution (much fighting occurred nearby at Jimenez) had not at the time of his writing seriously affected his group, but it did cut off for a while communication and supplies.

Also out of Professor Locke, and through Der Konvergenzpunkt, comes data on Edward N. Roberts, who is with the Andes Copper Mining Company at Chanaral, Chili. "He reports that since his graduation he has wandered around quite a bit, working in the various mining camps. While he was at the United Verde Mine in Jerome, Ariz., he met Gilbert Whitehead '23, P. C. Benedict '22, A. B. Weston '24, and Francis Van Buren. While he was at Ruth, Nev., he met Malcolm Hird and Henry Shick. On his way to Chili, Leo Hayes '23 got aboard the same boat at Trujillo, Peru, going to Lima on one of his vacations from the Northern Peru Smelting Company. Since he has been in Chili on the first year of his contract, he regrets to report that he has scanned The Technology Review in vain for some news of men in Course III.

While he was in the States he learned to become a soft rock miner in the Wedge Shaft property of the Nevada Consolidated Company at Ruth. He had his hard rock experience at Telluride and at Jerome, Ariz. His job in Chili has brought him into contact with leaching of copper ores and his present position is assistant and acting general foreman of the leaching plant. The present output of this leaching plant is around 5,000,000 pounds of copper monthly. Some trouble was met with the leaching of the fines in the ore so that the policy has been adopted of removing these fines before putting the ore into the leaching tanks."

Van Blarcom, the birth of whose daughter was recorded above, is in the zinc plant of the Anaconda Company, Great Falls, Mont., where he is research engineer. — Paul Frederick is now a financier with one of the Boston banks, according to the tyro of '27, Joseph H. Melhado. — Eliot Bidwell is assistant to the sales manager of the Abbott Ball Company of Hartford, Conn., manufacturers of steel bearing balls and ball burnishing equipment. According to him, business is rolling along, and he recommends, in view of the vital statistics that occupy so extensive a part of these Class Notes, that General Motors should begin to develop the market for baby carriages.

The Secretary wishes to apologize to Bruce Humphreville for donating in the last issue an unnecessary and highly objectionable "y" to the remaining letters of his name. "Y" oh "y" was it done?

Johnny Jacob and Lee Cummings, God bless them, are the only Course Secretaries reporting this month. The Secretary is grateful for the cooperation of all the Course Secretaries and he wishes a pleasant summer for every member of the Class. — J. R. KILLIAN, JR., *General Secretary*, Room 11-203, M. I. T., Cambridge, Mass.

COURSE II

Due to changing jobs and location about the time notes were due for the last issue, I did not have opportunity to send along news from Ced Valentine who wrote me some time ago that he had settled in New London, Conn., to fillet, freeze, and pack haddock and a few other varieties of fish. Working for the largest seafood producers on the Atlantic Coast, The Atlantic Coast Fisheries, Ced claims to need about every branch of science to keep up with his company. Having always regarded "fillet" as a noun to be intimately associated with tartar sauce, I am forced to register a large blank when it becomes a verb and hope Ced will see fit to enlighten my ignorance by communicating further details of the science of filleting.

Valentine also reports seeing McNeil, Hannauer, and Wood at the Alumni Dinner last February, at which time McNeil was still busy with insurance matters, while Hannauer had turned his efforts toward textiles. Ced has put his undergraduate crew experience to good use in helping Bill Haines with coaching since graduation.

1926 Continued

Hank Brown also rose to the occasion last month and reported for the Schenectady sector, where he and Nisbet hold forth. He reports Bob to be the G. E. heating and ventilating engineer while he himself has been transferred to the Marine and Aircraft Department on development work on aircraft accessories and instruments. King and a couple of other Technology men have been in to visit him.

A week-end visit to York, Penna., a short time ago proved highly enjoyable due to the presence of Al Ruff and Bill Hinckley. Among the bits of gossip uncovered and whereabouts confirmed were the following items: Sammy Eskin has returned to Europe; Fish has been a Benedick since soon after graduation; Libbey still teaches engine laboratory at school; Marshall still is in Illinois making roofing materials; Oakley was married last August to an Ohio girl and is still with Randall at Goodyear; Pardo is supposed to be back in Paris; Washburn is working in the paper business in Maine; and Carey was graduated from Harvard Business School last June. I also learned that Austin Ford had been married on April 16 to Miss Beatrice Doyle of Milford, Mass., and is living in Philadelphia. De la Vergne, for whom he was working, has been taken over by I. P. Morris and Company, and is now operated under that name.

For the York group things seemed to be hustling. St. Onge left the company and spent a year with *The Engineer* and now is attached to the Everpure Ice Company of Lawrence, Mass. Novo has been detailed to the Erecting Department of the Brooklyn office and is in line for foreign service. Masterman is on the road for the Engineering Department, while Ruff's work is largely development and investigation. Hinckley is in the Engineering Department and working on dry ice. The pneumatic mailing machine on which Ruff and Masterman wrote their thesis has been developed by them in addition to their regular work to a point where there are several firms bidding for the rights to manufacture it, and their first models have proven very satisfactory. It looks as though Course II may claim the first successful inventors of the Class.

A glance over my file shows that thirty-two out of the eighty-four living graduates of Course II in 1926 have dropped completely out of sight as far as this column is concerned. Not a whisper has come to my ears of their doings or whereabouts. Since a large proportion of the other addresses I have are doubtless obsolete, I think it about time we make an effort to bring things up to date. Accordingly I am having mimeographed a list of all the graduates of our Course, with the most recent addresses I have for them, and will mail a copy to each member at that address. If yours does not arrive in due time you may be sure that I have not your proper address, and it's up to you to get it to me along with an account of yourself for all the time you've been *incommunicado*. Please also send me corrections for the other fellows that you

know. By the time of our first reunion in 1931 we should have a 100 per cent record of each other's locations and achievements.

My own headquarters have been moved from Chicago to Baltimore, where I am working for the Glenn L. Martin Company on aircraft design. My new address is given below but any mail sent to my old address will be forwarded to me. I hope the summer will supply the necessary leisure for some inklings of news to be sent me so the fall issue will start out with a bang. — JOHN B. JACOB, *Secretary*, 4516 Arabia Avenue, Baltimore, Md.

COURSE X

When in Baton Rouge, your Course saw Ed Gore, Gene Herman '25, Prince Warner, Dave Shepard, and many more Technology men of other years. These boys are all married, as you know, and at our meeting at the expense of the development department of the Carter Oil Company it was unanimously agreed that the married state was the only one, and that connubial felicity was heartily and enthusiastically recommended to those backward members of the Course who are still holding out to go it alone. So hark, ye of small courage, double devilishness is far more to be desired than single blessedness!

The boys were all doing very well at Baton Rouge. All had cars of a more holy type than the common Ford. Dave and Mrs. Shepard have just finished building a very attractive house of the Spanish type on a beautiful spot just off the campus of the Louisiana State University. I believe Prince is also contemplating building a home soon. I had the pleasure of having dinner with Dave and his wife in their new home, which was indeed a real treat. I should have liked to have had time to visit the other boys but my trip was a hurried one, and the machinery of business knows no halt for pleasure.

The report has it that Paul Mahoney is also in the land of sunshine at Harrisburg, La., and appears to be very prosperous. His mission there is unknown. — Not long ago the old bird Stork made a long trip to the wastes of South America to bring a welcome gift to Walter and Mrs. Lobo — a son, Paul E. Congratulations, Walter, and we all hope Mrs. Lobo is faring well. Incidentally, the baby was born at an elevation of 4,500 feet. Walter is the head of the technical division of a Spanish sugar company there.

Bill Criswell is still on the jump and may be in New York City now, at 974 St. Nicholas Street, Apartment 6-A. It's lucky, isn't it Bill, that none of these maidens read *The Review*. — Jay Goldberg is now with the U. S. Industrial Chemical Company, Baltimore, Md., in their development department. — Jim Offet has made a short move to Chicago for the U. S. Gypsum Company, to help them in their Building Materials Research Laboratory. — Carl Everett is to marry Miss Campbell in June. The details are missing, but we wish them happiness. — Herb Kaufman married Miss Betty

Newberger in New York, January 19. This event should have been chronicled long since. May connubial bliss be theirs! — Olli Olander has just returned from an extensive tour of Europe to take up work with the Food Products Corporation in Boston.

Earl Eastman is reported to have been located permanently in Elizabeth, N. J., at the Standard Oil Co. of New Jersey. — Abe White is still with the Research Laboratory of Applied Chemistry and is doing some fine high pressure work out in the Barracks. I am indebted to Abe for much of the news herein contained. Blessings on him! — Fred Broughton is leaving the Laboratory to take charge of the Bayonne station of the Fuel and Gas Practice School. Ted Mangelsdorf has been in charge of that station and now is one of the heads of the Department of Fuel and Gas Engineering.

Bruce Humphreville dropped into the Laboratory not long ago. Bruce is still doing consulting work for the Bigelow-Hartford Company, and was debonair as usual. Hoppie, Giles Elbern Hopkins, now permanently with the same outfit, honored us with a visit. Hoppie, too, has been doing fine things technically developing a machine made hooked rug, which is really very good looking. However good his ability technically in developing this rug, it was far outdone by his salesmanship to the extent of arousing my curiosity sufficiently to go and see one. — I have left the wilds of Texas to resume work in the Research Laboratory of Applied Chemistry. Mrs. Cummings and I shall be happy to have you visit us at the following address. — LEE CUMMINGS, *Secretary*, 216 Upland Road, Cambridge, Mass.

1927

The announcement of one engagement and one wedding is all the news that has reached the Secretary's ear during the past two months. Just before these notes were written, we received word that Joe Burley was to be married on June 1 at the Second Unitarian Church in Brookline. Mrs. Burley was Ruth Thomas, the daughter of Mr. and Mrs. Charles Frederick Thomas. To Joe and Mrs. Burley go the congratulations and best wishes of the Class. — The other announcement really isn't news. All of the subject's friends will know. The card read, "Miss Elizabeth May Hart — Mr. John Oliver Collins."

Hank Steinbrenner sent in a note on the stationery of the Kinsman Transit Company, Cleveland, Ohio. He says, "I just can't get news out of my Course, although I have sent out several personal pleas to various individuals. I don't know a thing new. Please change my address again." Hank's address is 20,560 Morewood Parkway, Rocky River, Ohio.

The Secretary had a letter late last April which probably came from Bert Houghton. It was signed simply "Bert," so we are making what we think is a good guess on the other name. It says, "Here I am again, two thousand miles from home this time, working for an oil

1927 Continued

company. Quite a change from railroad-ing, eh what? Yes sir, we are looking for oil with a radio outfit, almost. As a matter of fact, the Geophysical Research Corporation, for whom I am working, uses an electrical seismograph with amplifiers, oscillographs, and so on, that makes a recording truck look like a broadcasting station. The apparatus is used to measure the time reflection and refraction of a dynamite blast from rock beds buried thousands of feet in the earth. At present, I am in the Tulsa office trying to learn what it is all about. I have been down here about three weeks, most of the time being spent in the field. I saw Mooney Owen and George Hall in Cleveland just before I left. . . . — JOHN D. CRAWFORD, *General Secretary*, 7 Goodwin Place, Boston, Mass.

COURSES I AND XI

The only item of news for this month is the very welcome letter from Don Horton which follows: "Spring and the unusual peroration from Reggie Jacobs in the last number of *The Review* inspire me to write, mainly for Reggie's latest address . . .

"I worked for the Mississippi River Commission until last June when I transferred here to the Cape Cod Canal as junior engineer. The climate was not to my liking in the Mississippi Valley, so I thought even New England preferable. In the latter part of June I married Miss Helen Hale of Haverhill. No need to say that we are very happy. Cape Cod is a great place in the summer, and we would be very glad to have you and your wife look us up if you ever happen to be down this way. We live at Monument Beach, and all the natives know us, as it is a small town. My work is interesting and I have learned a lot that is not in books. A peculiar feature so far is that I have languished in the office in summer and frozen in winter on outside work.

"Arnold Greenhalge is teaching in the Browne and Nichols School in Cambridge, and we meet occasionally. In St. Louis last spring I met Ylvisaker, who had been sent there from the Louisville U. S. Engineer Office to do some special work. Last June I saw Jack Boyle for a second in the North Station in Boston. He was then working on the new building there and, as I had to hurry away to catch a train, we didn't have time to say much more than hello. Small as Monument Beach is, there is another Technology man who lives here. He is Donald R. Dixon '14, who runs Dixon's Garage. Patronize him when you come to Cape Cod." — LEROY G. MILLER, 202½ Hubbel Avenue, Syracuse, N. Y.

COURSE VII

Once more we will have a notice in *The Review*, but it is no credit to you fellows, because I have not heard from any of you since the last one appeared.

There are two important items that I think you fellows ought to know. The first is that Jenny Jennison is going to get hooked. He announced his engagement about April 1 and he expects to get

married in the early fall. I think that he is the first one in our Course to plan that experiment. However, I heard that I. D. was going to get married the summer after graduation, but as he will not answer my questions, I don't know whether Jenny has the honors or not. Jenny's future boss is Miss Cynthia Lamb of Denver, Colo., a graduate student in Course VII. She is a very nice girl and I know that she will make Jenny a good wife and take good care of him.

The other item of interest is that George Darling is going abroad this summer with Professor Turner and others on a School Health and Health Education Tour. They will visit schools in Oxford, London, Paris, Brussels, Cologne, Geneva, Lucerne, Salzburg, Vienna, Prague, Berlin, Hague, and so on. They will spend about ten days in Geneva at the World Federation of Education Association meeting. They sail from Montreal on June 29 and arrive back in New York on September 1. — GEORGE G. MORRILL, *Secretary*, Room 10-403, M. I. T., Cambridge, Mass.

1928

These notes will sum up the news of the Class of '28 for their first year out. Already it has spread to the four winds and consequently these columns will often contain news that is stranger than fiction.

Our newspaper clipping service contains the announcements of three marriages and two engagements in which members of our Class play important rôles. Some of these marital doings are several months old but they will probably be real news to many '28 men. Carl M. Loeb, Jr., III, of Rye, N. Y., was married to Miss Lucile H. S. Schamberg on January 30. — Edgar Pitts Taylor, X, of Winchester, was married to Miss Helen F. White at Manchester, N. H., on April 20. The couple is now living in New York. — Richard S. Smith, known to Course XV men as Smitty, took the marriage vow with Miss Suzanne E. Drummond some time near the first of the year, and the couple now lives in Sommerville, N. J.

In the engagement column we find the announcement of marriage intentions between George D. Buckner, VII, and Miss Frances Ruth Walker of Dorchester; and also between James G. Willett and Miss Marion Winsor Freethy of Waban.

A recent letter from Paul Johnson revealed that he is still trying to make General Electric products run more efficiently and is continuing his fight against friction, windage, and copper losses. Paul was up to his old standard because he asked us to deliver messages to his female friends for him. Now that John Gilbert is married we may see the team of Greta Garbo and Paul Johnson and, boy, won't they be hot!

Course IV men will be interested to know that Frank Nocka of Cincinnati and Walter C. Wurdeman of Milwaukee won first and second prizes respectively in the annual Guy Lowell Memorial Competition in architecture. The winning design, which was one of thirty-seven sub-

mitted, entitled Nocka to an award of \$1,000 for six months abroad in travel and study.

The following is an excerpt from a letter from William DuVernet, mailed from 161 Emerson Place, Brooklyn, N. Y.: "I have been transferred to the transmission department of the general plant supervisor's force. My particular group has charge of the maintenance of toll lines and radio supply circuits, that is, the lines carrying the radio programs from the studio to the broadcasting point." — At present Harold Block, III, is with the research bureau of the Cleveland plant of the Aluminum Company of America. His work is research on the fabrication of magnesium base alloys.

In concluding this first year, I want to take this opportunity to thank all the Course Secretaries for the assistance which they have given me in assembling the Class Notes for each issue of *The Review*. Until next fall — *au revoir!* — GEORGE I. CHATFIELD, *Secretary*, Room 11-203, M. I. T., Cambridge, Mass.

COURSE I

Our request for news in the May Review has been answered with a vengeance. And now it's up to Ye Secretary to get it into shape.

First for a letter from Hurlburt. It came from Southampton, England, and was written from the S. S. *Megantic* — in fact, the EIP:TAH in the corner points to dictation. Terry is going up in the world rapidly. Here it is: "After graduation I started working for the Electrical Research Products, Inc., a subsidiary of the well-known American Tel. and Tel. Co. The purpose of the company is to lease and maintain the equipment for producing and reproducing talking movies on the Western Electric Sound Projection Equipment. They put me in school for two weeks and changed me from a civil to an electrical engineer. . . .

"At the start they threatened that the installation engineers would be traveling all over the globe from the time they left the New York office. I was installing the equipment for six months and didn't get out of New York State. The work was intensely interesting, all work done under pressure to meet an ever-mounting demand. Not much time was allowed for sleeping and eating. It is a curious existence not knowing where you will be the next week — or the next day, for that matter. One day in Buffalo the New York office wired me to report to the Pacific Coast for work in the recording installation department. By the time I was nicely packed and ready to start, I had another wire cancelling the Hollywood appointment and calling me to New York.

"The next phase was the most interesting of all. My work in New York was to teach the class in the installation school. Can you imagine a Course I man teaching electrical engineering to men in Course VI? . . .

"A week ago last Wednesday, March 20, the head of the export department called for me and asked me if I would

1928 Continued

teach school in London for two months, sailing the following Saturday. It was rather short notice, but I am off to teach the Britishers. Mrs. Hurlburt and I have been having a great vacation on the boat, and we will probably return some time in June."

News from Gaucher comes from 2048 Sixth Street, Port Arthur, Texas. That he is finding his work with the Texaco people interesting you can see from this extract from his letter: "After two weeks of field work laying out foundations for boilers, stills (oil), pumps, and so on, I was assigned a drafting table where I've been ever since. I didn't like it much at first — Texas is rather hot in the summer. However, winter revived pep and interest, so I think my future is completely tied up with oil and scandals. And that's not all that's fixed. The South has apparently adopted me for its own, for on February 23 Miss Hattie Lu Holman and I were married at her home in Eagle Lake, and believe it or not, I've been happy ever since. It was worth going through Technology for. The work is quite interesting. It involves everything from designing brackets for the support of walkways on tanks to batteries of continuous agitators. I've been making use of everything I ever learned in reinforced concrete, structures, bridge design, strength of materials, and E. E. E., and I'm trying very hard to learn some more about heat."

Clark continues to draw down princely sums with the Chicago Sanitary District. Political and financial troubles made the first three months of this year hectic ones for the district and, in turn, for Ken. Now with things quieting down, he feels more comfortable. Ken had been computing reinforcing steel for some weeks, but "About a month ago the boss took pity on me and assigned me to Sewer Connections. Whenever a nearby town connects to a S. D. C. interceptor, I trot out and watch the work. Most of the jobs are short — a couple of days. The one I'm now watching is quite large — two or three months. It is a gate chamber and head wall for the Niles Center sewerage system. My work is general supervision."

Cy Meagher surprised us all by strolling into the drafting room one day. For publication Cy stated that he "has not as yet been made president of any corporation." He is in New York City working for the Barney-Ahlers Company in their estimating department. The work is mostly on concrete industrial buildings, with the indoor estimating relieved occasionally by some work in the field.

Course I continues to migrate to Venezuela. Cook, Topping, and Contreras are there, and now Disario has gone to join them. Gabe stopped building New York's subways and, after a vacation of two weeks in Boston, sailed on April 10 for Venezuela. He is going into a job similar to that of Contreras, working for the government on highway construction.

Because of illness Porter had to quit his job with the Canadian Bell Telephone. Early in April Harold was in the Newton

Hospital. We hope everything is fine again now. — Sam Weibel is doing a fine job in his department of the Penn Railroad. A letter written to the Personnel Department here at the Institute said: "Because of the excellent work being done by one of your recent graduates, Mr. Weibel, we are anxious to engage some men from this year's class for similar work."

Ed Holmes's address (this is the usual bit from Kirk) is now Box 262, Lellington, N. C. That is the country where the hotels charge \$40 a month for room and board, and where the teachers at the county school supply all the interest. Ed's job is concrete inspection. Prior to North Carolina he was in Peekskill, N. Y., where a 100' rock cut supplied the work. In his travels Ed attended the inauguration in Washington on March 4, and says that one is plenty. He also ran into Hammond in Easton, Penna. Rumors are thick concerning the approaching marriage of the latter gent. How about a letter, Bill, to establish the facts?

Bill Tandy starts work July 1 with the Union Carbide Company. Within a few months the work will probably take him to West Virginia on the construction of a large hydro plant. Tandy's job as assistant to Professor Barrows is going to be taken next year by Bill Erickson. McCarthy is quitting as Professor Spofford's assistant to get into the airplane design game.

We understand that due to the death of his father, Bob Joyce has had to quit his job with the Curtiss Aeroplane people and is now back home in St. Louis. — Luby had a great time getting into his chosen field of hydroelectric work, but his present job, his fourth since graduation, at the Keokuk plant, on the Mississippi is the answer to his prayers — Weinberg continues on in New York, engaged at present on the construction of an apartment building at Seventy-Fifth Street and Madison Avenue.

There are several months before the next issue of The Review — time for everyone to sit down and drop me a line. Address me at 2113 John Avenue, Superior, Wis. — GEORGE P. PALO, *Secretary*, M. I. T. Dormitories, Cambridge, Mass.

COURSE IX

Paul Wilson writes me that he is now located in Boston as a consulting engineer. He also has acquired a "ball and chain," as he states in his letter, but even so, he seems to be getting along quite well. — Procter P. Wilson is at present teaching in the Murdock High School in Winchendon, Mass. — Lester A. Forsyth is working as a security salesman for Jackson and Curtis with headquarters in Lynn.

I received a letter from Kenneth Gove and also had the pleasure of calling on him and Mrs. Gove while in Schenectady a few weeks ago. Ken is the proud father of a son. He is working in the Radio Engineering Research Department of the General Electric Company.

As for myself, I was located with the Marland Oil Company during the summer

THE TECHNOLOGY REVIEW

and, after being disheartened, returned to Boston. At present I am with the National Fire Protective Association, making an effort to prevent fires in our country. — GEORGE D. MOCK, *Secretary*, National Fire Protective Association, 60 Batterymarch Street, Boston, Mass.

COURSE X

I have some real news for you this time. Yes, indeed, a most interesting thing has come to pass, or happened to occur, whatever you will. I have received official announcement of the marriage of Herbert Parmalee Dayton to Miss Charlotte E. Jacobs of Winchester, Conn. I am sure Herbert is to be congratulated, positive in fact, for I have heard from a very reliable source that he has a most charming wife. But as for Mrs. Dayton, well, at least we can offer our condolences, we who know Herb. Of course, the final summation leaves the score: Dayton 1, Hoak and Ferré 0. Herb leaves for Dayton, Texas, in June, where he will take up his work with the Humble Oil Company at once.

Dick Hoak next steps to the fore with a most enlightening and intriguing letter in which he gives vent to his spleen to the usual degree. Dick's ability, you remember, lies in the remarkable faculty he has of thinking up words to express whole trains of thought. For instance, in his letter the word "Bazocco" is a complimentary pseudonym given to Dayton, "Boston is as lousey as ever," "I'll be glad to get out of Bahston," and other such typical expressions. I gleaned a bit of information from his letter. Dick is taking Dave Haynes's place as assistant director at the Buffalo station next year. Dave is leaving to take a position elsewhere. It is rumored, Dick informs me, that Carlos Ferré may come back and take X-A this year.

Ho, who is at Akron University taking courses in rubber chemistry, informs me of his good health and interest in his work. He also evinces an interest in the fortune of "the ever fighting yet inseparable Hoak-Ferré-Dayton combine" as he puts it.

Last, but certainly not least, Charlie Southwick comes through with a real scoop. Charlie is with the Hazel-Atlas Glass Company of Wheeling, W. Va. Charlie is doing just the work he likes apparently, for he seems very enthusiastic about it. It is research in methods of food packing. A very interesting publication by Charlie and a collaborator was forwarded to me. The title of the paper was "Consistency and Stability of the Mayonnaise Emulsion." It really is a very pretty piece of work and on the inside page we see a picture of Charlie as handsome as ever. He writes that he doesn't understand how Phil Taylor is staying out of jail without his careful attention. — ALBERT J. GRACIA, *Secretary*, 222 West Market Street, Akron, Ohio.

COURSE XV

During the past month I have received letters from but two of the '28 men in Course XV. Ted Woods writes from

1928 Continued

Syracuse, N. Y., where he is representing the Robert A. Keasbey Company, magnesite and asbestos products. Ted's work consists mainly of "estimating for bids for contracts, direction of work on jobs which are being installed, and soliciting business in a certain territory" — the central part of New York State."

We are informed that Art Smith is located in Toledo, Ohio, and is connected with a concern engaged in the manufacture of hunting coats, and so on. We are not just certain as to what is meant by the "and so on."

The second letter came all the way from the wilds of Carthage, Mo., where our old friend, Henry Buntschuh, is now serving the Hercules Powder Company as resident engineer. Henry claims that in spite of all the well-meant warnings, advice concerning the dangers of powder and

condolences of his friends when he took the position, he has not yet been a figure in any explosion.

According to Henry, Chuck Carter has gone to the dogs. Chuck has, it appears, taken a decided interest in blondes, or perhaps it is that he has taken an interest in decided blondes. — PAUL E. RUCH, *Secretary*, 853 Harvard Street, Akron, Ohio.

1929

The Course Secretaries for the Class of '29 are as follows: Course I, Gordon R. Williams, 74 Amory Street, Brookline, Mass.; Course II, Ralph Vezin, 3 Parkway, Montclair, N. J.; Course III, William S. Hutchinson, Jr., 1235 Morton Street, Dorchester, Mass.; Course IV, Oswald V. Karas, Box 130, Schenectady, N. Y.; Course V, Frank B. Stratton, 654 Main

Street, Melrose, Mass.; Course VI, Ray M. Durrett, 303 Grand Avenue, Cumberland, Md.; Course VII, Hugh T. Griswold, Griswoldville, Mass.; Course VIII, Hugh G. Hamilton, Jr., 1765 Union Street, Schenectady, N. Y.; Course IX, Ralph B. Atkinson, Georgetown, Mass.; Course X, Paul V. Keyser, 1632 Hobart Street, Washington, D. C.; Course XI, Lawrence C. Hamlin, Garrettsville, Ohio; Course XIII, John H. Booth, Jr., 903 Park Avenue, Collingswood, N. J.; Course XIV, William W. Young, 330 Chestnut Street, Coatesville, Penna.; Course XV, Elmer A. Skonberg, 887 Adams Street, Dorchester, Mass.; Course XVI, Paul S. Baker, 140 Summit Avenue, Wollaston, Mass.; Course XVII, Leonard C. Peskin, 78 Wilson Avenue, Wilson, Conn. — EARL W. GLEN, *General Secretary*, 130 Summerfield Street, Fall River, Mass.

Worcester County Alumni Association of M. I. T.

A MEETING of the Worcester Association was held at the Tatnuck Country Club in Worcester on May 20. Previous to dinner, several members played golf, finishing up at the nineteenth hole in fairly good shape. At six-thirty dinner was served for thirty-four members and guests. The meeting was then called to order by the outgoing President, Mr. Sherman. It was decided to continue the scholarship and several plans were discussed for increasing the income of the Association.

The Nominating Committee was requested to report and offered the following slate which was accepted: President, Myles Morgan '23; Vice-President, Howard R. Stewart '17; Secretary-Treasurer, Charles R. Myer, Jr. '22; Executive Committee, Stanley D. Hartshorn '23, Arthur J. Brockelman '25, C. Arthur Newton '21, Theodore Packard '28, Lewis Davis '12.

After the business of the meeting had been completed, Robert T. Billings '32, scholarship man of 1929, gave a short but a remarkably good talk on the athletic side of Institute life. Following him, Professor Edward L. Bowles '22 of the Institute gave a short account of the work and objectives of the Radio Experimental Station at Round Hill, prefaced by some of his own somewhat depressing ideas on the Institute work of the present and the future, as directly affected by the growth of industrial research laboratories and their urgent need for trained men. The meeting was brought to a successful close at 10:00 P.M. — CHARLES R. MYER, JR. '22, *Secretary*, Whiting Milk Company, Worcester, Mass.

Detroit Technology Association

The annual dinner committee has been compelled to abandon its plans due to the lack of television equipment. There will be no further meetings this season, and the first fall meeting is tentatively set for the first Tuesday in October at the Uni-

versity Club, East Jefferson Avenue. — GEORGE F. GOKEY '21, *Secretary*, 8100 East Jefferson Avenue, Detroit, Mich.

Technology Club of Albany

A dinner meeting of the Technology Club of Albany was held at the Albany University Club on Thursday evening, May 9. Burt R. Rickards '99, President of the Club, presided, and by vote of the members present, Theodore Horton '94 acted as Secretary *pro tem*. Each member in turn stated his name, class, and professional position or occupation.

Immediately following the dinner Harlen M. Chapman '02 presented the guest of honor and speaker of the evening, Mr. W. L. Egy of the Gurley Instrument Company of Troy. Mr. Egy gave an illustrated talk on "Some Interesting Details Connected with the Manufacture of Surveying and Other Precision Instruments Produced by the Gurley Instrument Company." This talk was most interesting and instructive, and covered a description of the manufacture of transits and other surveying apparatus, difficulties involved in the selection of proper castings and other metals used in manufacture, methods employed in finishing and graduating parts, and other refinements.

The talk was concluded by a cordial invitation, given by Mr. Egy, to all members of the Club to visit the Gurley plant at any time. Following a rising vote of thanks to Mr. Egy for his interesting talk, adjournment was in order. — HAROLD F. HEDBERG '20, *Secretary*, 13 Fleetwood Avenue, Albany, N. Y.

The Technology Club of Central Ohio

Our spring dinner, with ten men present, was held at the University Club on Thursday, May 2. Our guest of honor was Professor James F. Norris from the Institute, who was in Columbus that week telling the world about organic chemistry. He talked most entertainingly of recent events, also about Roumanian

queens, Russian Soviets, and alcohol that has no kick. Seriously, our meeting was for the purpose of determining whether or not this Club should promote a scholarship to the Institute. Professor Norris told us how it could be done and the Club decided, due to local interest in aeronautics, to offer it in aeronautical engineering. Colonel Ralph H. Sweetser '92 was made chairman of the Scholarship Committee. — EDWIN M. WOODWARD '17, *Secretary*, 1394 Mulford Road, Columbus, Ohio.

New Haven County Technology Club

The Club entertained its members at a grand annual dance and entertainment on March 8. Tickets were sold at \$2.00 a couple in order to increase the money for the scholarship fund. The fun was held at the Yale University Faculty Club off the Green.

Other doings of the Club are listed briefly. On April 10 there was a lecture which will be described more in detail later. On May 18 was the meeting at Waterbury and on June 29 will be the Old Lyme meeting. Reports on these meetings will appear in the November issue of *The Review*. — STUART M. BOYD '18, *Secretary*, 9 Highland Avenue, West Haven, Conn.

M. I. T. Club of Western Maine

According to a clipping from a Portland newspaper the M. I. T. Club of Western Maine held a business meeting and luncheon on May 9 at the Elks Club. Dr. C. Eugene Fogg '06, President of the Club, announced that President Samuel W. Stratton would speak at the next meeting of the Club, to be held on May 24. He also announced that he hoped to have present Professor Edward P. Warner '17, Head of the Department of Aeronautical Engineering at Technology, on leave of absence, who has just returned from Washington where he acted as Assistant Secretary of the Navy for Aeronautics. Arrangements were made to

include the Engineers Club of Maine at the banquet. The committee in charge of arrangements consisted of President Fogg, William N. Todd '04, Lewis D. Nesbit, and Lester I. Beal '18.

A vote was passed at the May 9 meeting to hold a shore dinner early in June for the members and their wives or friends. Those present were: City Manager James E. Barlow '05, President Fogg, Edward M. Hunt '94, Joseph A. Warren '91, James C. Boyd '93, William N. Todd '04, William H. Lane '92, Donald O. Hooper '15, Earle H. Rumery '24, David R. Campbell '26, Hilliard D. Cook '21, Clyde A. Benson '22, John C. Barker '20, William H. Dow '89, Lester I. Beal, and Lewis D. Nesbit. — RAYMOND F. BENNETT '99, *Secretary*, 12 Dartmouth Street, Portland, Maine.

Technology Club of Florida

Nelson M. Fuller '23 has left Florida where he has been living in Jacksonville, to accept a business position in New Hampshire. He has not as yet sent in his new address. — HENRIETTA C. DOZIER '99, *Secretary*, 321 Barnett Building, Jacksonville, Fla.

Technology Club of Shanghai

The Shanghai unit begs to announce its existence as an active body, being sixty members strong and meeting regularly once a month. Over here we enjoy things in our own way. Nothing less than a good feed of at least fifteen courses will get the gang out. Our system is to select for each occasion three or four of the more prosperous members and appoint them as hosts responsible for the success of the coming gathering. Although we have loads of sing song girls handy to sing for us, we always dispense with them on these occasions and try our own vocal chords on Technology melodies. — WALTER KWOK '27, *Secretary*, 19 Lucerne Road, Shanghai, China.

Southwestern Association of M. I. T.

The monthly luncheon of the Southwestern Association of M. I. T. was held on May 8 at the University Club in Kansas City. Our Entertainment Committee is planning a dinner and bridge party for the benefit of our Scholarship Fund.

The Secretary reports the arrival of Nancy Alice Brown on April 10. — C. ELLSWORTH BROWN '20, *Secretary*, 402 Interstate Building, Kansas City, Mo.

Atlanta Association M. I. T.

The regular monthly round table luncheon of the Atlanta Association M. I. T. was held on Tuesday, May 7, in the Grill Room of the Atlanta Athletic Club. No regular program was presented, but all entered into a lively discussion of a

number of topics including the relative merits of the hotels and university clubs of New York, the need of a University Club in Atlanta, and a description of the life of the social elect of Charleston, S. C., by William E. Huger '22, the President of the Association.

Any Technology men who happen to be in Atlanta on the first Tuesday of every month are cordially invited to attend these luncheons which are held at 12:00 noon in the Grill Room of the Atlanta Athletic Club. — RICHARD W. SMITH '21, *Secretary*, State Geological Survey, Atlanta, Ga.

Washington Society of the M. I. T.

The Washington Society of the M. I. T. has held two regular speaker luncheons since the last issue of The Review. At the meeting on April 19, Dr. Dayton C. Miller, Head of the Department of Physics at the Case School of Applied Science, Cleveland, Ohio, gave an instructive address on his experiments with the interferometer to determine ether drift by relative velocities of light. At the meeting on May 17, Professor Harry W. Tyler '84 of the Institute gave an interesting talk on student and faculty activities, under the title of "Technology at Arm's Length."

Besides the President, Alfred E. Hanson '14, the Secretary, Professor Tyler, and some guests, the following were present at one or both of the meetings: Proctor L. Dougherty '97, Ridsdale Ellis '09, John R. Freeman, Jr. '16, Charles H. Godbold '98, Harry H. Groves '04, John C. Hawley '93, Amasa M. Holcombe '04, Joseph Y. Houghton '26, D. Arthur Lundquist '19, Allen B. McDaniel '01, Frederick H. Newell '85, William E. Parker '99, Clarence W. Perley '96, Allen Pope '07, Andrey A. Potter '03, Fred W. Ranno '89, George A. Ricker '86, Peter M. Strang '18, and Walter I. Swanton '93. — KENNETH P. ARMSTRONG '10, *Secretary*, 2002 Rhode Island Avenue, N. E., Washington, D. C.

The Technology Club of Rochester

After the culmination of a successful scholarship fund drive in January at which we realized a net profit of almost a thousand dollars, the Club has gone ahead with its activities and had luncheons for its members in February and March at the Rochester Club.

A dinner dance and social evening was held at the Oak Hill Country Club on Wednesday evening, April 10. After dinner the evening was spent in dancing and playing bridge, the former being much the more popular of the two diversions.

On April 18 the Club was very fortunate in having as its guest for a dinner, Professor Samuel C. Prescott '94, Past President of the Alumni Association and Head of the Department of Biology and Public Health. Professor Prescott, to-

gether with Drs. Clair E. Turner '17 and Bernard E. Proctor '23, was conducting a student tour for undergraduates through the packing industries of New York State. A dinner was held at the Rochester Club with the entire party as our guests.

The Club sent William W. Vicinus '23 to the recent annual convention of the Technology Clubs Associated in Pittsburgh as its official delegate to bring before the members of the convention the advisability of having the Institute prepare a suitable motion picture film depicting student life and activities at the Institute. It is understood that President Stratton is in favor of such a film and hopes to have one completed in time for the big reunion in 1930. — HENRY R. COUCH '20, *Secretary*, 126 Albemarle Street, Rochester, N. Y.

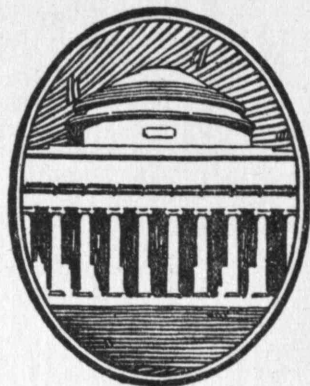
The Technology Club of Cincinnati

The sum for the Dormitory Fund raised by The Technology Club of Cincinnati was largely due to the efforts of Lawrence B. Cahill, Jr. '19. During the past year the architects also have done themselves proud at Technology, several Cincinnati men securing valuable scholarships. Louis H. Skidmore '23 won the Rotch Traveling Scholarship with two years in Europe, Frank J. Roorda '27 the first Guy Lowell Scholarship with one year in Europe and Paul F. Nocka '28 the second Guy Lowell Scholarship. Thomas H. Dreih's '28 winner of last summer's Fontainebleau Scholarship, is now in Cincinnati in the office of Charles F. Cellarius '16.

Frederick W. Garber '03, senior member of the architectural firm of Garber and Woodward, continues his prominence in local architectural circles, having been elected director of the Fifth Regional Division of the A. I. A. at the Sixty-Second Annual A. I. A. Convention in Washington, D. C.

Henry M. Waite '90, chief engineer of the Cincinnati Union Terminal Company, having finally taken the wheels from under his depot and given it to a local habitation, has been the recipient of well-deserved recognition. In a local paper the cartoonist has shown him as one of the footprints of the feet of progress in Cincinnati.

Another prominent Alumnus was in our city recently to address the Engineers Club of Cincinnati, Elmer A. Holbrook '04, now Dean of the School of Mines, University of Pittsburgh. His engagement did not permit him to attend our usual Tuesday luncheon at the Hotel Havlin. Clarence H. Spiehler '08, chief engineer of the Columbia Engineering and Management Corporation, is always religiously on hand to defend the public utilities. Those who come with a grievance leave with an obeisance. — WILLIAM V. SCHMIEDEKE '12, *Secretary*, Penker Construction Company, 1030 Summer Street, Cincinnati, Ohio.



INFORMATION

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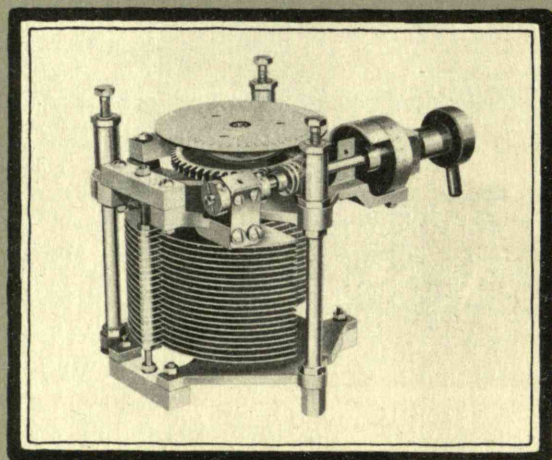
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